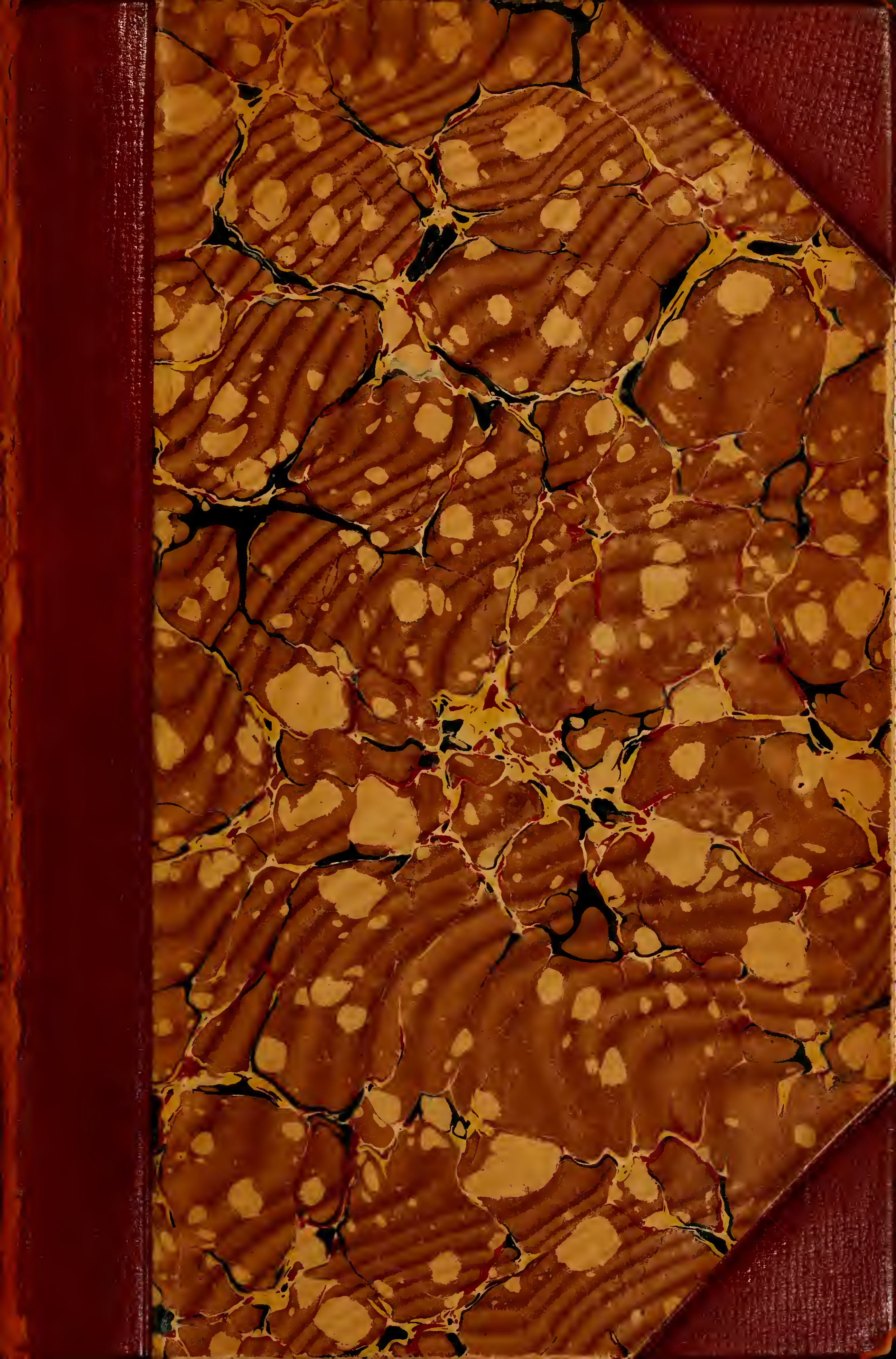

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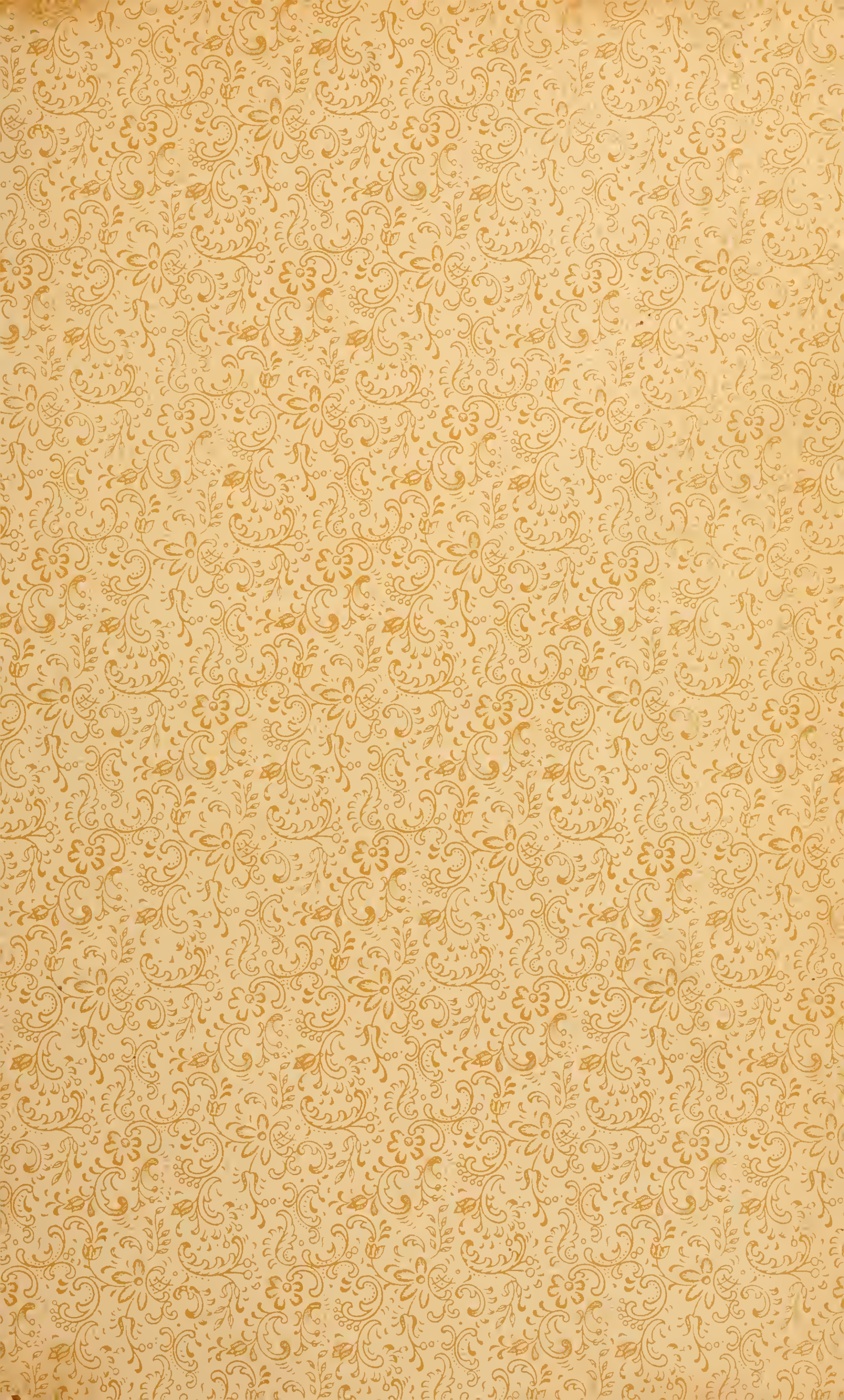

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UNIVERSITY OF MARYLAND—GENERAL VIEW
(Medical, Dental, Law and Pharmacy)

BULLETIN

OF THE

University of Maryland School of Medicine

AND

College of Physicians and Surgeons

Successor to THE HOSPITAL BULLETIN, of the University of Maryland, BALTIMORE MEDICAL COLLEGE NEWS, and the JOURNAL of the Alumni Association of the College of Physicians and Surgeons.

VOL. VI JULY, 1921 No. 1

ANNUAL ANNOUNCEMENT.

SESSION 1921-1922

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1921-1922.

SCHOOL OF MEDICINE.

September 19 to 24, Inc.—Examinations for advanced standing.

October 3—Regular session begins.

November 24—Closed (Thanksgiving Day).

December 21—Christmas recess begins after last lecture period.

January 4—Lectures resumed 9 A. M.

February 22—Closed (Washington's Birthday).

April 13—Easter recess begins after last lecture period

April 18—Lectures resumed. 9 A. M.

June 1—Commencement.

THE UNIVERSITY OF MARYLAND

Control of the University of Maryland is vested in a Board of nine Regents, appointed by the Governor and confirmed by the Senate for terms of nine years each. The General administration of the University is vested in the President. The University Council is an advisory body, composed of the President, the Assistant to the President, the Director of the Agricultural Experiment Station, the Director of the Extension Service, and the Deans. The University Council acts upon all matters having relation to the University as a whole, or to co-operative work between the constituent groups. Each school has its own Faculty Council, composed of the Dean and members of its faculty; each Faculty Council controls the internal affairs of the group it represents.

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The School of Medicine,
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The School of Dentistry.
The School of Pharmacy,
The School of Education,
The School of Chemistry,
The School of Home Economics,
The Graduate School,
The Summer School,
The Department of Military Science and Tactics,
The Department of Physical Education and Recreation.

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T. K. Galvin, M.D.
E. P. Smith, M.D.
George Strauss, M.D.

PATHOLOGICAL DIVISION.

Pathologists.

Standish McCleary, M.D.
Hugh R. Spencer, M.D.

Clinical Pathologist.

H. T. Collenberg, M.D.

Technician—Sister M. Joan, Ph.G.

DEPARTMENT OTO-NEUROLOGY.

J. W. Downey, Jr., M.D.

X-RAY DEPARTMENT.

Radiographers.

Albertus Cotton, M.D.
Harry L. Rogers, M.D.

MERCY HOSPITAL—RESIDENT STAFF.

J. J. Irwin, *Chief Resident.*

C. F. Foley, M.D.
F. A. Ries, M.D.
F. H. Pacienzo, M.D.
J. B. Ryon, M.D.
J. E. Koplowitz, M.D.
K. W. Golley, M.D.
J. S. Grabill, M.D.
C. E. Hawks, M.D.
H. V. Uffelman, M.D.
Oscar G. Costa, M.D.

DISPENSARY STAFF OF MERCY HOSPITAL.

Surgery.

Supervisors.

Alexius McGlannan, M.D.
W. D. Wise, M.D.

Attending Surgeons.

A. M. Evans, M.D.
D. S. Mohr, M.D.
F. L. Jennings, M.D.
F. X. Kearney, M.D.
O. H. Lloyd, M.D.
Clyde Marvel, M.D.
A. F. Hutchins, M.D.
Everard Briscoe, M.D.

Genito Urinary Surgery.

Supervisor. A. G. Rytina, M.D.

Attending Surgeons.

A. L. Tumbleson, M.D.
Harris Goldman, M.D.
H. C. Knapp, M.D.
A. J. Gillis, M.D.
J. F. Hogan, M.D.

Orthopedic Surgery.

Albertus Cotton, M.D.
Harry L. Rogers, M.D.

Medicine.

Supervisor, Wm. F. Lockwood.

Attending Physicians.

Martin F. Sloan, M.D.
B. T. Baggott, M.D.
J. W. Martindale, M.D..

Diseases of Stomach.

Supervisor, Julius Friedenwald, M.D.

Attending Physicians.

T. Frederick Leitz, M.D.
Theodore Morrison, M.D.
M. Feldman, M.D.
Joseph Sindler, M.D.

Nervous Diseases.

Supervisor, A. C. Gillis.

Attending Physicians.

L. A. M. Krause, M.D.
Milford Levy, M.D.
Wm. J. Todd, M.D.

Diseases of Women.

Supervisors.

W. S. Gardner, M.D.
A. Samuels, M.D.

Attending Surgeons.

E. P. Smith, M.D.
T. K. Galvin, M.D.
H. Palmisiano, M.D.
C. F. J. Coughlin, M.D.

Diseases of Nose and Throat.

W. F. Zinn, M.D.
R. F. McKenzie, M.D.

Diseases of Eye and Ear.

H. K. Fleck, M.D.
J. W. Downey, Jr., M.D.
Joseph Kemler, M.D.
M. Raskin, M.D.

Neuro-Otology.

J. W. Downey, Jr., M.D.

Proctology.

L. J. Rosenthal, M.D.

Dermatology.

Melvin Rosenthal, M.D.

Social Service Department.

Katherine A. Monahan, R.N., *Director.*
Catherine Campbell, R.N., *Assistant.*
Clara E. Connery, R.N., *Chief Dispensary Nurse*
Helen M. Moore, *Register.*

THE JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF MARYLAND FOR CRIPPLED CHILDREN.

R. Tunstall Taylor, A.B., M.D., *Surgeon-in-Chief.*

Associate Surgeons.

Sydney M. Cone, A.B., M.D.
Albertus Cotton, A.M., M.D.
Compton Riely, M.D.

Attending and Dispensary Surgeons.

W. H. Daniels, M.D.
W. Arthur Darby, M.D.

Instructors in Corrective Gymnastics.

Miss Anita Renshaw Presstman.
Miss Elizabeth Emory

Miss Mary H. Lee, *Principal of School.*

Miss Anna Chandlee, *Kindergartner and Industrial Teacher.*

Roentgenologists.

Henry J. Walton, M.D.
J. F. Lutz, M.D.

Attending Plastic Surgeon.

John Staige Davis, B.Sc., M.D.

Attending Physician.

Benjamin Tappan, B.A., M.D.

Attending Surgeon.

A. M. Shipley, M.D.

Attending Laryngolist.

F. B. Anderson, M.D.

Attending Dermatologist.

John R. Abercrombie, A.B., M.D.

Attending Pathologist.

Howard J. Maldeis, M.D.

Attending Urologist.

Gideon Timberlake, M.D.

Attending Oculist and Aurist.

William Tarun, M.D.

Attending Neurologist.

Irving J. Spear, M.D.

Attending Dentists.

G. E. P. Truitt, D.D.S.

J. B. Bell, D.D.S.

Consulting Surgeons.

W. S. Halstead, A.B., LL.D., *B.Sc.*, M.D.

J. M. T. Finney, A.B., M.D.

Randolph Winslow, A.M., M.D., LL.D.

Archibald C. Harrison, M.D.

Consulting Physicians.

Thomas R. Brown, A.B., M.D.

Llewellys F. Barker, A.B., M.D.

Thomas B. Futcher, A.B., M.D.

William S. Thayer, A.B., M.D.

Consulting Oculist.

Hiram Woods, M.D.

Consulting Laryngoloist.

John N. MacKenzie, A.B., M.D.

Dispensary and Social Service Nurse.

Miss Mabel Brown, R.N.

STAFF OF THE CITY HOSPITAL AT BAYVIEW.

Thomas R. Boggs, S.B., M.D., *Physician-in-Chief.*
Arthur M. Shipley, M.D., *Surgeon-in-Chief.*
H. D. McCarty, M.D., *Physician-in-Chief to the Municipal Tuberculosis Hospital.*
John R. Cash, M.D., *Pathologist.*

CONSULTING STAFF.

Ophthalmologist.
James J. Mills, M.D.

Otologist.
William Tarun, M.D.

Gynecologist.
R. G. Willse, M.D.

Urologist.
W. H. Toulson, M.D.

Largynologist.
Frank Dyer Sanger, M.D.

Pediatrician.
John Ruhrah, M.D.

Neurologist.
Henry M. Thomas, M.D.

ST. ELIZABETH HOME.

Attending Physicians.
Edgar B. Friedenwald, M.D.
Frank Ayd, M.D.

Surgeon.
Alexius McGlannan, M.D.

Neurologist.
A. C. Gillis, M.D.

STAFF OF NURSERY AND CHILD'S HOSPITAL.

Attending Physicians.

EDGAR B. FRIEDENWALD, M.D. HARRY GOLDBERG, M.D.

Consulting Physicians and Surgeons.

JOHN RUHRAH, M.D. WM. S. BAER, M.D. WM. F. LOCKWOOD, M.D.
ALBERTUS COTTON, M.D.

Oculist and Aurist.

HARRY FRIEDENWALD, M.D.

Superintendent.

MRS. O. V. JONES.

ST. VINCENT'S INFANT ASYLUM.

Visiting Physicians.

CHARLES O'DONOVAN, A.M., M.D. J. E. POULTON, M.D.
EUGENE H. HAYWARD, M.D. J. K. B. E. SEEGAR, M.D.
F. J. POWERS, M.D.

Visiting Surgeon.

ALEXIUS MCGLANNAN, M.D.

Visiting Oculists and Aurists.

J. FRANK CROUCH, M.D. CLYDE E. CLAPP, M.D.

Visiting Orthopedic Surgeons.

SYDNEY M. CONE, A.M., M.D. COMPTON REILLY, M.D.

Visiting Proctologist.

G. MILTON LINTHICUM, *A.M.*, *M.D.*

Pathologist.

SYDNEY M. CONE, A.M., M.D.

MATRICULATES, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS.

1920—1921.

POST-GRADUATES AND SPECIAL STUDENTS.

Name	State
Chapman, Arthur Wm.	New York
Feinstein, Elliott	Maryland
Hunt, Rose B.	Maryland
Lang, Robert Gibson	West Virginia
Mayoral, Joaquin	Cuba
Pritchard, Ruth S.	Bahama Islands
Wiener, Joseph	New York

FOURTH YEAR CLASS.

Name	State
Aubrey, John Forsyth	Maryland
Badagliacca, Francis Lucian	New Jersey
Barnes, Bruce	New Jersey
Benson, Carl Fisher	Maryland
Bernardo, John Ralph	Delaware
Bonfiglio, Vincent	Maryland
Bose, Jogesh Chandra, B. S.	Maryland
Broadrup, Earl Edgar	Maryland
Castro, Andres G.	Costa Rica
Costa, Oscar G.	Porto Rico
Culver, Samuel Hearn	Delaware
Dorf, Herman Jacob	New York
Fisher, C. F.	West Virginia
Fisher, Daniel Sebastian	Maryland
Foley, Charles J.	Maryland
Franklin, Joseph P., B. A.	Alabama
Freedom, Leon	Maryland
Gardner, Willetts Walton, A. B.	New York
Golley, Kyle Wood	Maryland
Grabill, J. Stanley	Maryland
Guyton, John Willis	Maryland
Hawks, Cyrus Eugene	Virginia
Heitsch, Hubert Messner	Michigan
Hobgood, Legan Henry, B. S.	Massachusetts
Hoheb, Albert Salomon	Porto Rico
Holofcener, Julius I.	Maryland
Jaffe, Albert	Maryland
John Baxter, S.	Virginia
Joska, Vincent Vernon	Maryland
Joyner, George Richardson	Virginia
Keegan, Daniel Francis, B. A.	Connecticut
Kemp, Richard Joseph	Maryland
Lass, Louis	New York
Luban, Benjamin	New York
McCoy, Arley Von, A. B.	West Virginia
Martinez, Ezequiel	Porto Rico
Matthews, Stanley Wm.	North Carolna
Monniger, Arthur Cecil	Pennsylvania
O'Rourk, Thomas Rutter	Maryland
Pacienzo, Frank Anthony	Maryland
Paulson, Moses	Maryland
Peters, Edgar Allan Poe, B. S.	Kentucky
Pillsbury, Harold C.	Maryland
Plyler, Ralph Johnson, A. B.	North Carolina
Pokorny, Joseph	Maryland
Quinones, Norberto A.	Porto Rico
Reynolds, Francis A.	Massachusetts
Ries, Ferdinand A.	Maryland
Romilly, Harold A.	Virginia
Ryon, James Barry, A. B.	Maryland
Sabin, Fred C.	New York
Savage, Philip J.	Connecticut
Schilling, Jesmond Wm.	Pennsylvania
Seay, Thomas Waller	Virginia
Sherman, Solomon	Maryland
Shircliff, Elliott Walter	Maryland
Shubert, Felix S.	Pennsylvania
Skvarla, John Augustus	New Jersey
Sowers, Jacob Long, B. S.	North Carolina
Stone, Saul Gordon	Ohio
Szczerbicki, John Valentine	Maryland
Tilghman, Stanley J.	Maryland
Timko, Louis Michael	Pennsylvania
Wangler, Herman Ernest	New York
Ward, Edwin E.	Maryland
Weinkauf, Ferdinand	Michigan
Wells, George Edward	Maryland
Wiest, Paul Foreman	West Virginia
Wilkerson, James Herbert	Maryland
Williams, Mortimer H.	Virginia
Wilson, W. Wellford, Phar. D.	Maryland
Wolfe, James Clinton	New Jersey
Yeager, Leslie Arno, B. S.	Maryland

THIRD YEAR CLASS.

Name	State
Bailey, Harry, B. A.	Connecticut
Bolewicki, Peter Edward, A. B.,	Maryland
Buchness, Anthony V., A. B.	Maryland
Champe, Jr., Ira Preston	West Virginia
Doshey, Louis Jacob, B. A.	New York
Fleischmann, Berthold, B. S.	New York
Freidus, Elias	New York
Fritz, Julius Dudley	New York
Fulton, William James	Maryland
Ginsberg William, B. A.	New York
Goldmann, Bernhard Alexander,	Pennsylvania
Gollick, William A., B. S.	New Jersey
Gordon, Herbert	New York
Greenbaum, Leonard Harry	Maryland
Groff, Morris	New York
Hatfield, Daniel S.	West Virginia
Halley George C.	Idaho
Harman, Robert Dave, B. S	West Virginia
Hollister, William, B. S.	North Carolina
Horowitz, Herman Jack, B. S.,	New York
Huff, William, B. A.	Virginia
Ingram, David N.	Maryland
Keefe, George G., A. B.	Connecticut
Kerdasba, Geo.	New Jersey
Krager, John J., B. A.	Maryland
Kunkowski, Andrew	Maryland
Lang, Milton Charles	Maryland
Lawson, Lawrence Wells, B. A.,	West Virginia
Linke, Julian P.	New Jersey
McCoy, C. Glen, A. B.	West Virginia
Mercier, Albin Scott, A. B.	Maryland
Middlemiss, Wm. Robert, B. S.	Utah
Morgan, Edw. Nicholas	New York
O'Connor, John Andrew, A. B.	Maryland
Noll, Louis, B. S.	Connecticut
Payne, John Edward, B. S.,	West Virginia
Peters, H. Raymond, B. A.	Maryland
Pittman, Henry Lee	North Carolina
Pullen, Guy Foote	Connecticut
Rhodes, Bricey Milton	Florida
Rudisill, John David, A. B.,	North Carolina
Salzberg, Abraham	New York
Saporito, Archibald R.	New Jersey
Sekerak, Arthur Joseph Francis,	Connecticut
Scotellaro, Nicholas J	New York
Shannon, George Edmon	Maryland
Shapin, Sydney	New York
Shapiro, Louis Mendelsohn, B. A.,	Connecticut
Sternberg, Harry	New York
Stovin, Joseph Samuel, Ph. B.,	Connecticut
Stout, Philip David, B. A.	Tennessee
Sweet, Samuel Waterman, B. S.,	New York
Trynin, Aaron H., B. A.	New York
Warfield, Jr., John Ogle, A. B.,	Pennsylvania
Wilson, Thomas Norwood, A. B.,	Maryland

SECOND YEAR CLASS.

Name	State
Beck, Nathaniel M., A. B.	Maryland
Berkson, Morris I.	Pennsylvania
Cortese, Anthony Edward	New Jersey
Dart, Frederick Bond	Connecticut
Desane, Joseph	New York
Edmonds, John Milton	Michigan
Evatt, Clay Welbourn	South Carolina
Feraca, Salvadore J.	New York
Gillum, Donald A.	Maryland
Glass, Benjamin E.	New Jersey
Goldberg, Ben	New York
Gutowski, Joseph Matthew	New Jersey
Hagerman, Paul	West Virginia
Harp, J. Elmer	Maryland
Hirsch, Philip	New York
Hundley, Jr., John T. T., A. B.	Virginia
Keith, Marion Yates	North Carolina
Kenney, Joseph R., A. B.	Pennsylvania
Knipp, George S.	Maryland
Kraut, Arthur Milton	New Jersey
Kyper, Frederick	Pennsylvania
Long, Ira C., A. B.	North Carolina
Love, Jr., William S., A. B.	Maryland
McLean, Herbert, B. A.	New Jersey
McVay, Edward A., A. B.	Rhode Island
*Maurillo, Dominick Francis, A. B.,	New York
Newcomer, David Redenon, B. S.,	Maryland
Parson, Willard Sigsbee	Pennsylvania
Peterman, James Elmer	Pennsylvania
Pontery, Herbert	New Jersey
Povalski, Alexander William	New Jersey
*Rio, del Juan	Porto Rico
Rothfuss, Paul A., B. S.	Pennsylvania
Ruche, Harry Charles	Pennsylvania
Schorr, Richard	New York
Shealy, Walter Hal, B. A.	South Carolina
Smith, Charles Franklin	Pennsylvania
Steincrohn, Peter Joseph	Connecticut
Sussman, Abram Alles	Maryland
Touhey, Thomas Joseph	Delaware
Ware, Jr., Harry Hudnall	Virginia
Wasserstrom, Sidney	New York
Weinert, Henry V.	New Jersey
White, Robert Stanislaus	West Virginia

*Note—Not in attendance.

FIRST YEAR CLASS.

Name	State
Allen, Moore Lowry	Utah
Anderson, Albert Louis	Maryland
Antonius, Nicholas	New Jersey
Austerlitz, John, Phar. D.	Maryland
Barnes, D. Keith	Utah
Bartlett, Jr., Charles Wm.	Florida
***Battistini, Pedro Arrache**	Porto Rico
Bentz, Felix	Connecticut
Bershatsky, William	New York
Bleier, Louis	New York
Boyd, Kenneth Bray	Maryland
Briglia, Nicholas Natale	Pennsylvania
Carter, Carl John	West Virginia
***Davila, Jose Esteban**	Porto Rico
Edelman, Edward Isidor	New York
Fisher, Harry Richard	New York
Flax, Ira Isador	New Jersey
Friedman, Bernard	New York
Friedman, Irving	New Jersey
Gattens, Wilber Elton	Maryland
Gottlieb, Bernard Norman	New York
Granoff, Joseph F.	New York
Greifinger, Marcus Harry	New Jersey
Grimm, Wilson O.	West Virginia
Grossblatt, Philip	New Jersey
Hamilton, Dewey Dallas	West Virginia
Howell, Clewell, B. S.	North Carolina
Jacobson, Philip	Maryland
Kauffman, Aaron W.	Pennsylvania
Koons, Earle Weant, B. S.	Maryland
Knox, Joseph Clyde	North Carolina
Kraczyk, Michael Joseph	New Jersey
Kratz, Fred William	Maryland
Lalley, Paul Francis	Pennsylvania
Lehman, Julius	New York
Leibensperger, George F.	Pennsylvania
Levine, Samuel	New Jersey
McLane, William Oliver, B. S.	Maryland
Marciniak, Edward S.	New Jersey
Marsh, James T., A. B.	Maryland
Marton, Samuel	New York
Maseritz, Isidore	Maryland
Megahan, Burke	Pennsylvania
Messinger, Benjamin	New York
Miller, Benjamin	Maryland
Miller, Jacob	Maryland
Miller, Jose G.	Maryland
Molinsky, Meyer	New York
Moriarty, Louis	Connecticut
Morris, Philip	New York
Morrison, Jr., William Henry,	Pennsylvania
***Munoz, Justo Luis**	Porto Rico
Nash, A. E.	New Jersey
Nelson, James Wharton, A. B.	Maryland
Neustaedter, Theodore	New York
Nocera, Domingo	Porto Rico
Norment, John E., A. B.	Maryland
Oyler, Ralph Ziegler, B. S.	Pennsylvania
Pachtman, Isadore	Pennsylvania
Perry, Arch. H.	North Carolina
Pitkowsky, Louis	New York
***Rodriguez, Virgilio Ortiz**	Porto Rico
Sarubin, Benjamin	Maryland
Scagnetti, Albert	New York
Scheindlinger, Morris I.	New York
Schlenger, Leo Brenner	New Jersey
Schultz, Louis Ariel	New York
Scimeca, Antonio Adolfo	New York
Seliger, Robert V.	New York
Shapiro, Ralph N.	New Jersey
Tabershaw, Arnold Leon	New York
Taub, Samuel	New York
Theuerkauf, Frank Joseph	Pennsylvania
Urbanski, Adrian Xavier	New Jersey
Weiner, Hymen L.	Pennsylvania
Weinstock, Alex. A.	New York
Whaley, Thomas Bravard	Maryland
Woodyard, Edwin Sayre	West Virginia
Zaslow, John	New York

*Note—Not in attendance.

GENERAL SUMMARY OF STUDENTS ATTENDING THE UNIVERSITY OF MARYLAND, SESSION OF 1920-21.

College of Home Economics	21
College of Agriculture	218
College of Engineering	114
College of Liberal Arts	76
College of Education	40
The School of Chemistry	30
The Graduate School	23
The Summer School, 1920	208
The Department of Military Science and Tactics	194
School of Medicine	252
School of Law	474
School of Dentistry	157
School of Pharmacy	75
Total	1,882

GRADUATES, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS,

JUNE 1, 1921.

Name	State
Aubrey, John Forsyth	Maryland
Badagliacca, Francis Lucian	New Jersey
Barnes, Bruce	New Jersey
Benson, Carl Fisher	Maryland
Bernardo, John Ralph	Delaware
Bonfiglio, Vincent	Maryland
Bose, Jogesh Chandra, B. S.	Maryland
Broadrup, Earl Edgar	Maryland
Castro, Andres B.	Costa Rica
Costa, Oscar G.	Porto Rico
Culver, Samuel Hearn	Delaware
Dorf, Herman Jacob	New York
Fisher, C. F.	West Virginia
Fisher, Daniel Sebastian	Maryland
Foley, Charles J.	Maryland
Franklin, Joseph P., B. A.	Alabama
Freedom, Leon	Maryland
Gardner, Willetts Walton, A. B.	New York
Golley, Kyle Wood	Maryland
Grabill, J. Stanley	Maryland
Guyton, John Willis	Maryland
Hawks, Cyrus Eugene	Virginia
Hobgood, Legan Henry	Massachusetts
Hoheb, Albert Salomon	Porto Rico
Holofcener, Julius I.	Maryland
Jaffe, Albert	Maryland
John, Baxter S.	Virginia
Joska, Vincent Vernon	Maryland
Joyner, George Richardson	Virginia
Keegan, Daniel Francis, B.A.	Connecticut
Kemp, Richard Joseph	Maryland
Lass, Louis	New York
Luban, Benjamin	New York
McCoy, Arley Von, A. B.	West Virginia
Martinez, Ezequiel	Porto Rico
Matthews, Stanley William	North Carolina
O'Rourk, Thomas Rutter	Maryland
Pacienzo, Frank Anthony	Maryland
Paulson, Moses	Maryland
Peters, Edgar Allan Poe, B. S.	Kentucky
Pillsbury, Harold C.	Maryland
Plyler, Ralph Johnson, A. B.,	North Carolina
Pokorny, Joseph	Maryland
Quinones, Norberto A.	Porto Rico
Reynolds, Francis A.	Massachusetts
Ries, Ferdinand A.	Maryland
Romilly, Harold A.	Virginia
Ryon, James Barry, A. B.	Maryland
Sabin, Fred C.	New York
Savage, Philip J.	Connecticut
Schilling, Jesmond Wm.	Pennsylvania

Name	State
Seay, Thomas Waller	Virginia
Sherman, Solomon	Maryland
Shircliff, Elliott Walter	Maryland
Shubert, Felix S.	Pennsylvania
Skvarla, John Augustus	New Jersey
Sowers, Jacob Long, B. S.,	North Carolina
Stone, S. Gordon	Ohio
Szczerbicki, John Valentine	Maryland
Tilghman, Stanley J.	Maryland
Timko, Louis Michael	Pennsylvania
Wangler, Herman Ernest	New York
Ward, Edwin E.	Maryland
Weinkauf, Wm. Ferdinand	Michigan
Wells, George Edward	Maryland
Wiest, Paul Foreman	West Virginia
Wilkerson, James Herbert	Maryland
Williams, Mortimer H.	Virginia
Wilson, W. Wellford, Phar. D.	Maryland
Wolfe, James Clinton	New Jersey
Yaeger, Leslie Arno, B. S.	Maryland

PRIZEMEN.

University Prize—Gold Medal	OSCAR G. COSTA
Certificate of Honor	JAMES HERBERT WILKERSON
Certificate of Honor	CHARLES FREDERICK FISHER
Certificate of Honor	FERDINAND A. RIES
Certificate of Honor	JOHN RALPH BERNARDO
Certificate of Honor	JOGESH CHANDRA BOSE
Clinical Medicine Prize	CHARLES F. FISHER

In the third year the Jose L. Hirsch prize of $50.00 was awarded to John Ogle Warfield, Jr., for the best work in Pathology during the second and third years.

THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

AND

COLLEGE OF PHYSICIANS AND SURGEONS.

As a result of the merger accomplished in 1915 the combined schools offer the student the abundant resources of both institutions, and, in addition, by earlier combination with the Baltimore Medical College, the entire equipment of three large medical colleges.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. It was chartered in 1807, under the name of the College of Medicine of Maryland, and its first class was graduated in 1810. In 1812 the College was empowered by the Legislature to annex three other colleges or faculties, of Divinity, of Law, and of Arts and Sciences, and the four colleges thus united were "constituted an University by the name and under the title of the University of Maryland."

Established thus for more than a century, the School of Medicine of the University of Maryland has always been a leading medical college , especially prominent in the South and widely known and highly honored throughout the country.

The beautiful college building at Lombard and Greene Streets, erected in 1814-1815, is the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837), and here were first installed independent chairs for the teaching of Diseases of Women and Children (1867) and of Eye and Ear Diseases (1873).

The School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for the senior student was first established.

In 1913 Juncture was brought about with the Baltimore Medical College, an institution of 32 years' growth. By this association the facilities of the School of Medicine were enlarged in faculty, equipment and hospital connection.

The College of Physicians and Surgeons was incorporated under the Legislative enactment in 1872, and established on Hanover Street in a building afterwards known as the Maternité, the first obstetrical hospital in Maryland. In 1878 union was effected with the Washington University School of Medicine, in existence since 1827, and the College was removed to its present location at Calvert and Saratoga Streets. By this arrangement, medical control of the City Hospital, now the Mercy Hospital, was obtained, and on this foundation in 1899 the present admirable college building was erected.

CLINICAL FACILITIES.

HOSPITALS AND DISPENSARIES.

UNIVERSITY HOSPITAL.

The University Hospital, which is the property of the Faculty of Physic of the University of Maryland, is the oldest institution for the care of the sick in the State of Maryland. It was opened in September, 1823, under the name of the Baltimore Infirmary, and at that time consisted of but four wards, one of which was reserved for eye cases. By successive additions this hospital was increased to more than fourfold its original accommodations, there being added to it a large clinical amphitheatre, a students' building for the accommodation of the thirty clinical assistants, and a nurses' building for the accommodation of the pupils of the Training School for Nurses. The yearly increase in the number of patients seeking admission to the hospital, however, more than kept pace with the increase in accommodations, and the Faculty therefore erected an entirely new and modern hospital of fully double the capacity of the former building.

The University Hospital is constructed of brick and Tennessee limestone in the Colonial style of architecture, fronting 175 feet upon Lombard Street, and about the same on Greene Street. It is supplied with the most modern and approved system of heat-ing, ventilation, etc., and equipped with all modern requirements and conveniences for the care of the sick, and for the clinical instruction of the students of the University.

It is one of the largest and finest hospitals owned and controlled by any medical school in America, and in point of architectural beauty, convenience and completeness of arrangements and equipment compares favorably with other hospitals.

An important adjunct to the hospital is the postmortem building, which is constructed with special reference to the instruction of students in pathological anatomy.

The hospital is situated opposite the University building, so that the student loses no time in passing from the lecture halls to the clinical amphitheatre, dispensary and wards.

A portion of the hospital is used as a marine hospital for foreign seamen. The great importance of Baltimore as a shipping point brings into her harbor many vessels from all parts of the world, and the sick sailors who are cared for in the wards of the institution give the students an opportunity to observe a large variety of diseases. Another considerable portion of the building is used as a Municipal Hospital, and contains charity beds supported by the City of Baltimore. This department of the hospital is taxed to its utmost capacity to afford accommodations for the patients seeking admission.

Owing to its location, being the nearest hospital to the largest manufacturing district of the city, the University Hospital receives for treatment a very large number of accident cases of all kinds, both slight and serious. These cases, as well as patients suffering from the various diseases of our own climate, occupy the beds, and add greatly to the facilities of clinical teaching enjoyed by the school. The facilities for clinical instruction have been greatly enlarged by an appropriation by the State of Maryland for the support of free beds for patients from the various counties.

MERCY HOSPITAL.

The Sisters of Mercy first assumed charge of the Hospital at the corner of Calvert and Saratoga streets, then owned by the Washington University, in 1875. By the merger of 1878 the Hospital came under the control of the College of Physicians and Surgeons, but the Sisters continued their work of administering to the patients.

In a very few years it became apparent that the City Hospital, as it was then called, was much too small to accommodate the rapidly growing demands upon it. However, it was not until 1888 that the Sisters of Mercy, with the assistance of the Faculty of the College of Physicians and Surgeons, were able to lay the cornerstone of the present Hospital. This building was completed and occupied late in 1889. Since then the growing demands for more space has compelled the erection of additions, until now there are accommodations for 351 patients.

In 1909 the name was changed from The Baltimore City Hospital to Mercy Hospital.

Mercy Hospital is located in the center of a city of 750,000 inhabitants, and is under the exclusive medical control of the College of Physicians and Surgeons. It adjoins the College building, and all surgical patients from the public wards are operated upon in the College operating rooms. This union of the Hospital and College buildings greatly facilitate the clinical teaching, as there is no time lost in passing from one to the other.

Mercy Hospital is the hospital of the United Railways and Electric Company of Baltimore City, and receives patients from the Baltimore & Ohio Railroad Company and from the Pennsylvania Railroad Company and its branches.

During the calendar year of 1920 there were treated in the various departments of this hospital more than 20,000 people.

FRANKLIN SQUARE HOSPITAL.

The Franklin Square Hospital has a capacity of 112 beds. During the year ending December 31, 1920, 1,505 cases were treated in the hospital, and 1,280 patients were treated in the dispensary. Ten hundred and thirty-nine surgical operations were performed in the hospital.

LYING-IN HOSPITALS.

MATERNITY HOSPITAL OF THE UNIVERSITY OF MARYLAND.

This institution is also the property of the Faculty of Physic and under its exclusive control and direction, and is conducted with the special purpose of furnishing actual obstetrical experience to each member of the graduating class.

New accommodations have been provided in the general hospital, and the Maternity Department now offers better facilities than ever before, while the large increase in clinical material has made it possible to offer excellent opportunities for post-graduate work.

THE WEST END MATERNITY.

The West End Maternity adjoins the Franklin Square Hospital and furnishes an abundance of clinical material, which is under the control of the Faculty of Physic.

OUT-PATIENT CLINIC AND DISPENSARY.

In connection with the University Hospital an out-door obstetrical clinic is conducted, in which every case has careful prenatal supervision, is attended during labor by a graduate physician and graduate nurse—one senior student also being present—and is visited during the puerperium by the attending student and graduate nurse. Careful prenatal, labor and puerperal records are kept, making this work of extreme value to the medical student, not only from the obstetrical standpoint, but in making him appreciate the value of social service and public health work.

NUMBER OF PATIENTS.

During the year ending December 31, 1920, the number of patients treated in the Lying-In hospitals connected with the School was as follows:

Number of Confinements in Hospitals	348
Number of Confinements Out-Patient Department	904
Average number of cases seen by each student of the graduating class	18

THE MUNICIPAL HOSPITALS—BAY VIEW.

The clinical advantages of the University have been largely increased by the liberal decision of the Board of Supervisors of City Charities to allow the immense material of these hospitals to be used for the purpose of medical education. There are daily visits and clinics in medicine and surgery by the Staff of the hospitals. The autopsy material is unsurpassed in this country in amount, thoroughness in study, and the use made of it in medical teaching.

The Municipal Hospitals consist of the following separate hospitals:

The General Hospital, 160 beds.
The Hospital for Chronic Cases, 88 beds.
The Municipal Hospital for Tuberculosis, 190 beds.
City Detention Hospital for Insane, 450 beds.

THE JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF MARYLAND FOR CRIPPLED CHILDREN.

This institution contains seventy-five beds for the active treatment of deformities. It is situated at "Radnor Park," a colonial estate of seventy-five acres at Hillsdale, within the western city limits, reached by trolley.

This institution has city, state, endowed and private beds and every modern facility for the treatment of orthopedic cases as well as a most beautiful park-like environment and farm, and is closely affiliated with the University of Maryland, for bed-side instruction.

ST. VINCENT'S INFANT ASYLUM.

The facilitiess of this institution, containing 250 infants and children, have been kindly extended to the University of Maryland by the Sisters of Charity. This large clinic enables this school to present to its students liberal opportunities for the study of diseases of infants and children.

INSTITUTIONS FOR THE TREATMENT OF THE INSANE AND FEEBLE-MINDED.

The Sheppard and Enoch Pratt Hospital for the Insane. This institution is one of the most modern hospitals for the treatment and care of the insane in this country. It is well endowed and its superintendent is R. M. Chapman, M.D., Clinical Professor of Psychiatry at the University of Maryland. In this hospital intensive treatment and study of mental diseases is carried on, a large number of the patients entering voluntarily. The students under the direction of Dr. Chapman and his assistants in a series of clinics are shown the early manifestations and the various stages of mental diseases, the methods of treatment, and their effects.

Mount Hope Retreat for the Insane. This hospital contains an average of 750 patients and is attended by Dr. Chas. G. Hill, Professor of Psychiatry of this faculty. Under the direction of Dr. Hill and his assistants the students are given opportunity for the study of large groups of patients showing all phases of various mental and nervous disorders.

DISPENSARIES.

The dispensaries associated with the University Hospital and the Mercy Hospital are organized upon a uniform plan in order that the teaching may be the same in each. Each dispensary has the following departments: Medicine, Surgery, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopedics, Proctology, Dermatology, Throat and Nose, and Tuberculosis.

All students in their junior year work in the departments of Medicine and Surgery each day in one of the dispensaries.

All students in their senior year work in the special departments one hour each day.

Some idea of the value of these dispensaries for clinical teaching is shown by the number of patients treated. For the year 1920 about sixty-seven thousand visits were made to the dispensaries.

In addition to these the Dental Department, situated upon the grounds of the University, conducts a daily clinic which is open to medical students.

University Hospital Dispensary Report, January 1. *to December* 31. 1920.
J. A. Skladowski, M.D., Dispensary Physician.

Department.	*New Cases.*	*Old Cases.*	*Total.*
Skin	2,561	4,412	6,973
Children	1,318	4,219	5,537
Obstetrical	1,285	2,811	4.096
Surgical	841	3,247	4,088
Eye and Ear	1,014	1,575	2.589
Gynecology	598	1,638	2,236
Medical	725	1,502	2,227
Genito-Urinary	557	1,480	2,037
Neurology	126	1,682	1,808
Orthopedics	92	1,067	1,159
Gastro-Enterology	103	713	816
Nose and Throat	353	442	795
Tuberculosis	122	171	293
Proctology	32	48	80
	9,727	25,007	34.734

Mercy Hospital Dispensary Report, January 1 to December 31, 1920.
B. S. Hanna, M. D., Dispensary Physician.

Dispensary Clinics.	*Old.*	*New.*	*Total.*
Surgical	2,367	933	3.300
Medical	627	846	1,473
Gynecological	705	416	1,121
Eye and Ear	440	418	858
Nose and Throat	702	556	1,258
Neurological	460	221	681
Pediatric	33	31	64
Gastro-Intestinal	631	262	893
Dental	28	40	68
Proctological	25	46	71
Orthopedic	128	85	213
Dermatological	222	219	441
Genito-Urinary Surgery	20,193	1,734	21,927
Total	26,561	5,807	32.368

LABORATORIES.

ANATOMICAL LABORATORIES.

These laboratories are in charge of the Professor of Anatomy and his assistants. The University has recently built its own storage and embalming plant, which supplies an abundance of anatomical material. Anatomical material is furnished in abundance, free of charge.

LABORATORY OF EXPERIMENTAL PHYSIOLOGY.

This laboratory occupies the first floor of Gray Laboratory; it includes a large student laboratory, with capacity of forty students, a room completely equipped for mammalian experimentation, a stock-room, and an office for the professor in charge. Within the same building there is an animal room in which there is kept a constant supply of material for experimentation and demonstration. The laboratory is equipped with ample apparatus; there is a complete set of student apparatus available for each group of two students, while the special apparatus for laboratory experimentation and class-room demonstration is adequate for the needs of the courses.

LABORATORY OF PHYSIOLOGICAL CHEMISTRY.

(See page 52.)

LABORATORY OF HISTOLOGY AND EMBRYOLOGY.

This laboratory is fully equipped for teaching Histology and Embryology.

There is a large collection of charts, specimens and apparatus used in teaching. The necessary equipment for the practice of technique is provided.

LABORATORIES OF PATHOLOGY AND BACTERIOLOGY.

The subject of special bacteriology is taught during a portion of the second year in a well equipped laboratory containing sterilizers, water baths, and other necessary equipment for this purpose.

The subject of histopathology is also taught during the second year in a properly equipped laboratory. The details concerning this work are described under the subject of Department of Pathology and Bacteriology.

The instruction in gross pathology is obtained during the third year by attendance upon the autopsies at the University Hospital and the Mercy Hospital, and special instruction in this subject is also given by demonstrations with a large amount of pathological material at the City Hospitals situated at Bay View. The subject of gross pathology is also taught in the third year by means of lectures and demonstrations to sections of the third year class and a special effort is made to apply this subject to the explanation of the symptoms and clinical signs of disease. The instruction in autopsy technique is also given personally to small groups of students.

LABORATORIES OF CLINICAL PATHOLOGY.

These laboratories are fully equipped for the study of practical laboratory work in its relationship to clinical medicine. Each student is supplied with a locker, containing sufficient apparatus for any ordinary examination.

The wards and out-patient departments of the hospitals furnish an abundance of material for study.

By reason of individual equipment, much work outside of class hours is expected of the student.

The class rooms are adequately lighted, and are conveniently situated for teaching purposes.

LIBRARIES.

The University Library, founded in 1813 by the purchase of the collection of Dr. John Crawford, now contains 14,259 volumes, a file of 58 current journals, and several thousand pamphlets and reprints. During the year ending December 31, 1920, 141 volumes were added. It is well stocked with recent literature, including books and periodicals of general interest. The home of the Library is Davidge Hall, a comfortable and commodious building in close proximity to the class rooms and the laboratories of the Medical Department. The Library is open daily during the year, except in August, for use of members of the Faculty, the students, and the profession generally.

The Library of the Medical and Chirurgical Faculty of Maryland, containing many thousands of volumes, is open to the students of the school. The leading medical publications of the world are received by the library and complete sets of many journals are available. Other libraries of Baltimore are the Peabody (181,000 volumes) and the Enoch Pratt Free Library (355,817 volumes).

All these libraries are open to the students of the school without charge.

The proximity of Washington places the immense libraries of the national capital at the disposal of the students of the school.

ANNUAL APPOINTMENTS.

On February first of each session the following annual appointments are made from among the graduates of the school:

TO THE UNIVERSITY HOSPITAL

- Medical Superintendent.
- Five Senior Residents, viz:
  - Two Resident Surgeons.
  - One Resident Physician.
  - One Resident Gynecologist and Obstetrician.
  - One Resident Pathologist.
- Thirteen Junior Residents on a rotating service.

A number of students are appointed each year, at the close of the session, as Clinical Assistants in the University Hospital for the summer months.

TO THE MERCY HOSPITAL.

Chief Resident Physician.
Six Resident Surgeons.
Four Resident Physicians.
One Resident Gynecologist.
One Resident Obstetrician.

TO THE MARYLAND GENERAL HOSPITAL.

Medical Superintendent:
Four Senior Residents, viz:
  One Resident Surgeon.
  One Resident Physician.
  One Resident Gynecologist.
  One Resident Obstetrician.
Eight Junior Residents on a rotating service.

Each resident serves a term in every department, including the pathological laboratory and the Maryland Lying-in-Hospital.

Many appointments to other hospitals of Baltimore are made annually, to which graduates of this school are eligible.

REQUIREMENTS FOR MATRICULATION.

Admission to the course in medicine is by a completed Medical Student Certificate issued by the State Department of Education of Maryland. This certificate is obtained from the Department of Education on the basis of satisfactory credentials, or by examination and credentials, and is essential for admission to any class.

The requirements for the issuance of the Medical Student Certificate are:

(a) The completion of a standard four-year high school course or the equivalent, and in addition,

(b) Two years or sixty semester hours of college credits, including chemistry, biology, physics, and English.

Women are admitted to the Medical Department of this University.

(A) DETAILS OF THE HIGH SCHOOL REQUIREMENT.

1. Graduation from an accredited high school after pursuing a four-year course based upon an eight-year elementary course or its full equivalent; or

2. Successfully passing entrance examinations in the following subjects:

(*a*) *Required Eleven* (11) *Units.*

	Units.
English, 4 years	3
Elementary and Intermediate Algebra	1
Plane Geometry (first five books)	1
Two years of a foreign language	2
Two of the three sciences—Biology, Chemistry, Physics	2
American History and Civics	1
Ancient History or English History	1

(*b*) *Electives, Four* (4) *Units.*

(1) History and Political Science:

Ancient History or English History	1
Mediaeval and Modern History	1 or ½
General History	1 or ½
Civics	½
Economics	½

(2) Language:

French 2 years	2
German 2 years	2
Greek 2 years	2
Hebrew 2 years	2
Italian 2 years	2
Latin 1 or 2 years	1 or 2
Spanish 2 years	2

(3) Mathematics:

Advanced Arithmetic	½
Advanced Algebra	1
Plane Trigometry	½
Solid Geometry	½

(4) Science:

Physics, Biology or Chemistry	1
Physical Geography and Geology	1
Astronomy	½
Physiology and Hygiene	½

(5) Vocational and cultural subjects:

Agriculture	1
Bookkeeping	1
Commercial Geography	½
Domestic Science	1
Drawing Mechanical 1 and 2	½ each
Drawing Freehand 1 and 2	½ each
Manual Training	1
Music	1
Stenography	1 or 2

One unit in any subject is the equivalent of work in that subject for five periods per week for a year of at least thirty-six weeks, periods to be not less than forty-five minutes in length. One unit is equivalent to 2 semester credits or 2 points.

(B) DETAILS OF THE COLLEGE REQUIREMENT.

a. The preliminary college course shall extend through two college sessions of at least thirty-two weeks each of actual instruction, including final examinations.

b. In excellence of teaching and in content, the work of this preliminary college course shall be equal to the work done in the freshman and sophomore years in standard colleges and universities.

c. This preliminary college course shall include courses in physics, chemistry, biology, and English, each course to embrace at least six, eight or twelve hours of work in each subject, as shown in the schedule following.

SCHEDULE OF SUBJECTS OF THE TWO-YEAR PRE-MEDICAL COLLEGE COURSE.

Sixty Semester Hours Required.

	Semester Hours.
REQUIRED COURSES:	
Chemistry (a)	12
Physics (b)	8
Biology (c)	8
English Composition and Literature (d)	6

COURSES STRONGLY URGED:

A modern foreign language.
Comparative vertebrate anatomy
Psychology
Social science

A semester hour is the credit value of sixteen weeks' work consisting of one lecture or recitation period per week, each period to be of not less than fifty minutes' duration net, at least two hours of laboratory work to be considered as the equivalent of one lecture or recitation period.

(a) CHEMISTRY. Twelve semester hours required, of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work. In the interpretation of this rule, work in qualitative analysis may be counted as general inorganic chemistry. The remaining four semester hours required shall consist of work in organic chemistry.

(b) Physics. Eight semester hours required, of which at least two must be laboratory work. This course presupposes a knowledge of plane trigonometry.

(c) Biology. Eight semester hours required, of which four must be laboratory work. This requirement may be satisfied by a course of eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany, but not by botany alone. The requirement may be satisfied also by 6 semester hours of college biology, including three semester hours in laboratory work, if preceded by a year (one unit) of high school biology.

(d) English Composition and Literature. The usual introductory college course of six semester hours, or its equivalent, is required.

POST-GRADUATE STUDENTS.

Graduates in medicine desiring to take the work of the senior year without being candidates for the degree and, therefore, without examination, may receive a certificate of attendance on completing the full course satisfactorily.

The requirements for graduates in medicine admitted to the fourth year class as candidates for the degree of Doctor of Medicine are the same as those enforced against undergraduates admitted to advanced standing.

COMBINED COURSE IN ARTS AND MEDICINE.

Students who have completed the junior year in our School of Liberal Arts and who have made an approved choice of electives may, if they desire, do the entire work of the senior year in the medical school of the University. If they successfully complete the work of the first medical year they are graduated with their class with the degree of Bachelor of Arts.

By taking advantage of this privilege a man may complete the Undergraduate and Medical courses in seven years.

During three of these years or until he has completed the work of the junior class he is a resident student in the School of Liberal Arts at College Park, Maryland, and for four years he is a student in the Medical School in Baltimore.

At the end of the fourth year he receives the A.B. degree, and at the end of the seventh year the M.D. degree, but credit from the Medical School cannot be accepted in subjects for which credit has already been given in the School of Liberal Arts.

The same privilege is allowed students of St. John's College, Annapolis, Maryland.

Special premedical courses have been arranged in our School of Liberal Arts at College Park and also by St. John's College at Annapolis.

RULES.

1. All students are required to stand the spring examinations unless excused by the Dean. No student will be permitted to advance from a lower to a higher class with conditions.

2. Should a student be required to repeat any year in the course he must pay regular fees.

3. A student failing in final examination for graduation at the end of the fourth year will be required to repeat the entire course of the fourth year and to take examinations in such other branches as may be required, should he be again permitted to enter the school as a candidate for graduation.

4. The general fitness of a candidate for graduation will be taken into consideration by the Faculty as well as the results of his examinations.

All the above rules, as well as the fees stated below, relate to the year ending June 1, 1922, only. The right is reserved to make changes in the curriculum, requirements for graduation, fees and all the regulations whenever the Faculty deem it expedient.

FEES.

Matriculation fee (paid each year)	$5.00
Tuition fee (each year)	250.00
Breakage fee (each year)	10.00
Special and re-examination fee	5.00

No fees are returnable, except unused portion of breakage fee.

Tuition fees are due and payable during October.

The above fees apply to all students who matriculate in this institution in any class for the session beginning October 3, 1921.

SPECIAL COURSES.

Anatomy		$75.00
Physiology		75.00
Pathology		75.00
Embryology		75.00
Bacteriology		75.00
Physiological Chemistry		75.00
Pharmacology		75.00
Clinical Laboratory (four months)		100.00
X-Ray (four months)		150.00
Orthopedic Surgery (four months)		150.00
Genito-Urinary Diseases (four months)		150.00
Gynecology and Gynecological Pathology		100.00-150.00
Obstetrics, Out-door	6 weeks	$25.00
	4 months	50.00
Out-Door and In-Door	6 weeks	50.00
	4 months	100.00
Surgery: Clinical Surgery Operative Surgery Surgical Pathology		By arrangement
Medicine		By arrangement
Laboratory Technician Course, including Bacteriology and Clinical Pathology		$150.00

If the courses are taken during holidays or if special supervision is desired or additional material required, the charge is made accordingly.

FACULTY PRIZE.

To stimulate study among the candidates for graduation, the Faculty offers a Gold Medal to the candidate who passes the best general examination. Certificates of Honor are awarded to the five candidates standing next highest.

JOSE L. HIRSCH PRIZE.

A prize of $50.00 is given each year by Mrs. Jose L. Hirsch as a memorial to the late Jose L. Hirsch, formerly Professor of Pathology in this school, to the student in the third year who has done the most satisfactory work in Pathology.

SCHOLARSHIPS.

The Dr. Samuel Leon Frank Scholarship.

This scholarship, established by Mrs. Bertha Rayner Frank as a memorial of the late Dr. Samuel Leon Frank, an alumnus of this University, entitles the holder to exemption from the payment of the tuition fee of that year.

It is awarded by the Trustees of the Endowment Fund of the University in each year upon nomination of the Medical Council. "to a medical student of the University of Maryland, who, in the judgment of said Faculty, is of good character and in need of pecuniary assistance to continue his medical course."

This scholarship is awarded to a second, third or fourth year student only, who has successfully completed one year's work in the medical course, and no student may hold such scholarship for more than two years.

The Charles M. Hitchcock Scholarships.

From a bequest to the School of Medicine by the late Charles M. Hitchcock, M.D., an alumnus of the University, two scholarships have been established which entitle the holders to exemption from payment of tuition fees for the year.

These scholarships are awarded annually by the Medical Council to students who have meritoriously completed the work of at least the first year of the course in medicine, and who present to the Faculty satisfactory evidence of good moral character and of inability to continue the course without pecuniary assistance.

The Randolph Winslow Scholarship.

This scholarship, established by Prof. Randolph Winslow, M.D., LL.D., entitles the holder to exemption from the payment of the tuition fee of that year.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination of the Medical Council, to "a needy student of the Senior, Junior, or Sophomore Class of the Medical School.

"He must have maintained an average grade of 85% in all his work up to the time of awarding the scholarship.

"He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance."

THE UNIVERSITY SCHOLARSHIPS.

Two Scholarships are awarded by the University. One to a student of the Department of Liberal Arts appointed by the President; the other, which entitles the holder to exemption from payment of the tuition fee of the year, is awarded annually by the Medical Council to a student of the Senior Class who presents to the Medical Council satisfactory evidence that he is of good moral character and is worthy of and in need of assistance to complete the course.

THE ST. JOHN'S SCHOLARSHIP.

This scholarship is awarded annually by the Medical Council upon the nomination of the President of St. John's College.

It entitles the holder to exemption from the payment of the tuition fee of that year.

FREDERICA GEHRMANN SCHOLARSHIP.

This scholarship was established by bequest of the late Mrs. Frederica Gehrmann and entitles the holder to exemption from payment of tuition fees. This scholarship is awarded to a second year student who at the end of the year passes the best practical examination in Anatomy, Physiology, Physiological Chemistry and Pharmacology.

NOTICE TO STUDENTS.

The personal expenses of students are at least as low in Baltimore as in any large city in the United States. The following estimates of student's personal expenses for the academic year of eight months have been prepared by students, and are based upon actual experience:

Items.	*Low.*	*Average.*	*Liberal.*
Books	$27	$48	$75
College Incidentals	20	20	20
Board, eight months	200	250	275
Room rent	64	80	100
Clothing and laundry	50	80	150
All other expenses	25	50	75
Total	$386	$529	$695

Students will save time and expense upon their arrival in the city by going direct to the School of Medicine on the University grounds, N. E. corner of Lombard and Greene Streets, where the Superintendent of Buildings, who may be found at his office on the premises, will furnish them with a list of comfortable and convenient boarding houses suitable to their means and wishes.

The Dean will, if desired, attend to the collection of checks and drafts for students.

For further information apply to

J. M. H. Rowland, M.D., *Dean*,
Lombard and Greene Streets.

ORGANIZATION OF THE CURRICULUM.

The following curriculum is the result of a thorough revision of teaching in this school in order to meet modern requirements. The multiplication of specialties in medicine and surgery necessitates a very crowded course and the introduction of electives will very soon be depended on to solve some of the difficulties.

The curriculum is organized under eleven departments:

1. Anatomy (including Histology and Embryology).
2. Physiology.
3. Chemistry (including Physiological Chemistry).
4. Pharmacology and Materia Medica.
5. Pathology.
6. Bacteriology.
7. Medicine (including Medical Specialties).
8. Surgery (including Surgical Specialties).
9. Obstetrics.
10. Gynecology.
11. Ophthalmology and Otology.

The instruction is given in four years of graded work.

Several courses of study extend through two years or more, but in no case are the students of different years thrown together in the same course of teaching.

The first and second years are devoted largely to the study of the structures and functions of the normal body, and laboratory work occupies most of the student's time during these two years.

Some introductory instruction in Medicine and Surgery is given in the second year. The third and fourth years are almost entirely clinical.

A special feature of instruction in the school is the attempt to bring together teacher and student in close personal relationship. In many courses of instruction the classes are divided into small groups and a large number of teachers insures attention to the needs of each student.

In many courses the final examination as the sole test of proficiency has disappeared and the student's final grade is determined largely by partial examinations, recitations and assigned work carried on throughout the course.

ARRANGEMENT OF CLASSES.

All the teaching of the freshman class is done at Calvert and Saratoga Streets. All the teaching of the sophomore class is done at Lombard and Greene Streets.

The junior class has three hours of didactic teaching each morning. For clinical instruction and laboratory work this class is divided into two sections and the year into semesters. Each section will work for one semester at the University Hospital and one semester at Mercy Hospital.

The senior class is divided into two sections and for this class the year is divided into semesters. Each section receives clinical instruction for one semester in the University Hospital and the Mercy Hospital. In the afternoon the whole class is assembled and has two hours of didactic teaching each day.

This distribution of the classes is made in order to utilize to the best advantage the laboratory space and to bring the students into daily contact with patients in both of the hospitals and dispensaries.

DEPARTMENT OF ANATOMY, INCLUDING HISTOLOGY AND EMBRYOLOGY.

C. L. Davis, M.D	Professor of Anatomy
Tilghman B. Marden, A.B., M.D.	Professor of Histology and Embryology and Assistant in Anatomy
J. W. Holland, M.D	Associate Professor of Anatomy
M. J. Hanna, M.D	Assistant in Anatomy

First Year. *Didactic.* Five hours each week for thirty-two weeks. Each day, preceding the laboratory period, a quiz and demonstration of from 40 to 50 minutes is held, covering the laboratory work for the day.

Laboratory. Eighteen hours each week for sixteen weeks. Twelve hours each week for sixteen weeks. This course includes a complete dissection of the human body, including the central nervous system. Abundance of good material is furnished and the student is aided in his work by competent demonstrators. Practical examinations are held at frequent intervals throughout the session and each student will be held to strict account for material furnished him. Each student is furnished a skeleton and a deposit is required to insure its return in good condition at the end of the session.

SECOND YEAR. *Didactic.* Three hours each week for six weeks. Lectures, recitations and conferences.

Laboratory. Seven hours each week for six weeks. This course is devoted exclusively to Neuro-Anatomy. A complete dissection of the human brain is required. This is followed by a study of the fiber tracts of the spinal cord and brain, special models and preparations being used for this part of the course.

HISTOLOGY.

FIRST YEAR. Lectures, recitations and laboratory work, nine hours each week during first semester; three hours each week during second semester. The most important part of the work will be done in the laboratory, where each student will be provided with a microscope, apparatus, staining fluids and material necessary for the preparation of specimens for microscopical examination. An important aid to the course is the projection microscope which is used for the projection upon a screen of magnified images of the specimens actually used in the laboratory.

A large number of completely prepared sections are loaned to the students for study. This materially reduces the time otherwise required by the student for the preparation of sections and insures the best possible class of material for study.

EMBRYOLOGY.

Lectures, recitations and laboratory work; six hours each week during the second semester.

This course includes the study of the development of the chick, and the fundamental principles of mammalian embryology. In the laboratory, the hen's egg will be studied in its various stages of development, and sections of the chick at different periods of incubation will be made and studied microscopically. The latter part of the course will be devoted to the study of sections through different regions of a mammal.

Special emphasis is laid upon the development in the human.

DEPARTMENT OF PHYSIOLOGY.

Bartgis McGlone, A.B., Ph.D., F.O.C.P	Professor of Physiology
Charles C. Conser, M.D	Associate Professor of Physiology
Harold E. Wright, M.D	Instructor in Physiology
Firmadge K. Nichols. M.D	Assistant in Physiology

The course in Physiology extends throughout the First and Second Years. It consists of a series of lectures, covering the field of human physiology, laboratory work, demonstrations, and frequent recitations. It is constantly in the mind of the department that this course is introductory to the study of medicine. The recitations cover the subject-matter of the lectures and the experiments performed in the laboratory.

First Year. 1. This course includes lectures and recitations upon the physiology of the blood and circulation, respiration, muscle and nerve, a portion of the central nervous system, and special senses, and such chemical and physical facts as are necessary for a proper understanding of the physiology taught. Two lectures and a recitation weekly throughout the year. Dr. McGlone, assisted by Dr. Wright.

Second Year. 2. *Didactic instruction.* During this year the remaining topics of physiology are covered by lectures and demonstrations. As in the first year frequent recitations will be held. The subject-matter includes the physiology of digestion and secretion, nutrition, metabolism, internal secretion, and the cranial central nervous system. Lectures, demonstrations, and recitations, three hours per week. Dr. McGlone, assisted by Dr. Conser.

3. *Experimental Physiology.* This is a laboratory course in the dynamics of muscle and nerve, studies in circulation and respiration, and physiology of the special senses. Apart from the acquisition of the facts of physiology, the student is taught to observe accurately, record carefully the results of his observations, and from these results draw an independent conclusion. He is also trained in the use of instruments which are of value to him in his clinical years. Three hours weekly throughout the year. Drs. McGlone, Conser and Wright.

4. *Elective Course in Physiological Technique.* This course is offered to Sophomores. Three hours per week. Second semester.

5. *Special Mammalian Physiology.* This is a laboratory course intended for advanced Laboratory students (optional) who may wish to do special work in this line of physiology. Hours to be arranged. Dr. McGlone.

6. *Research in Physiology.* Properly qualified students will be admitted to the laboratory, which is well adapted for post graduate study and special research. Hours will be arranged to suit individuals. Dr. McGlone.

PHARMACOLOGY AND MATERIA MEDICA.

William Henry Schultz, Ph.B., Ph.D.........Professor of Pharmacology
O. Glenn Harne, A.B...............Associate Professor of Pharmacology

1. *Pharmacology.* Materia Medica and Prescription Writing required of all second year medical students during the first semester. Didactic, three hours a week; Laboratory, three hours a week.

This course is a prerequisite to all other courses in Pharmacology. Special emphasis is laid upon laboratory methods of observation and of intelligent note-taking. The essentials of prescription writing are taught and the student is introduced to the official pharmacopoeal preparations.

Not only is the student taught intelligently to use the United States Pharmacopea and the National Formulary, but the principles underlying the establishing of some of the most practical receipts are attacked from a didactic point of view.

2. *Systematic Pharmacology.* Required of all second year medical students. Three hours a week during the year, two lecture periods and one period for quiz and general conferences. Special care is taken to adapt the material to the practical needs of the medical student. Emphasis, however, is laid upon the pharmacological action of drugs as a pure science in order that a critical attitude toward drugs may be instilled. As the student masters the pharmacology of an important drug, its dosage, incompatibilities, and practical applications are driven home by systematic assignments of prescription writing, quizes, and conferences.

3. *Pharmacodynamics.*—Second semester. Required of all second year medical students. Prerequisite pharmacology 1. Laboratory, six hours a week.

The course runs parallel with pharmacology 2. Being a laboratory course it furnishes much didactic material used in the class conferences and lectures of pharmacology No. 2.

As the student's ability in handling biological material develops, experiments involving the more difficult technic of pharmacological experimentation are introduced. Special emphasis is laid upon the student's ability to handle live tissues and to make first-hand observations of a given drug's action, regardless of what standard text-books teach.

Class conferences, discussions, and the reading of assigned papers are used to supplement the laboratory and lecture. In these conferences the professor in charge attempts to summarize the class work as a whole, thereby properly coordinating it. It is by these means that the student acquires a critical and scientific attitude toward *official* and *new and non-official remedies.* The study is limited for the most part to such drugs as are known to have a definite pharmacological action and therapeutic value.

4. *Special Pharmacodynamics.* (Credit according to work done.) This course is open to advance students and special workers who desire advanced training, or who wish to pursue some special problem in Pharmacology or Toxicology. Hours to be arranged. Professor Schultz.

5. *Research in Pharmacology and Chemo-Therapy.* Properly qualified students are admitted to the laboratory with a view to their carrying on original investigations in drug action. The newly equipped laboratories are well adapted for post-graduate study and research in Pharmacology. Hours will be arranged to suit the applicant. Professor Schultz.

DEPARTMENT OF PATHOLOGY.

Hugh R. Spencer, M.D	Professor of Pathology
Standish McCleary, M.D	Professor of Pathology
Sydney Cone, M.D	Associate Professor of Pathology
Wm. J. Carson, M.D	Associate Professor of Pathology
Richard Dresser, M.D	Assistant in Pathology

Courses of instruction in pathology are given during the second, third and fourth years. The courses are based on previous study of normal structures and functions and aim to outline the natural history of disease. The instruction is made as practical as possible that the student may become familiar with the appearance of organs and tissues in disease and may be able to correlate anatomical lesions with clinical symptoms and signs.

1. General Pathology and Histo-pathology. This course is given to second year students, it includes the study and demonstration of disturbances of the body fluids, disturbances of structure, nutrition and metabolism of cells, disturbances of fat, carbohydrate and protein metabolism, disturbances in pigment metabolism, inflammation and tumors. The laboratory course consists in a daily preliminary lecture, after which the student is given microscopical sections for study. Gross material from autopsy and from the museum is demonstrated in conjunction with the microscopical study.

2. Applied Pathology, including Gross Morbid Anatomy and Morbid Physiology. Third year students: In this course the special relationship of the gross and microscopical lesions to clinical symptoms and signs is emphasized. Fresh material from autopsy collected at the various hospitals is demonstrated and supplemented by a study of the respective autopsy protocols.

Special stress is laid upon the study of the infectious diseases and where possible the causative agents are studied.

3. Autopsies. Third year. Autopsy technic is taught to small groups of students by special instruction at autopsies performed at the various hospitals. Students are required to assist at the autopsy, study the organs, examine the microscopical sections, make cultures and prepare autopsy protocols.

4. Clinical Pathological Conference. Fourth year. Material from autopsies is studied with reference to the clinical history and gross and microscopical anatomy, the course is illustrated with sections of fixed material or lantern slides.

5. Advanced Work in Pathology. Properly qualified students will be permitted to carry out advanced or research work along the lines of experimental pathology. Adequate space and equipment is available.

DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY.

Wm. Royal Stokes, M.D., Sc.D.	Professor of Bacteriology
Frank W. Hachtel, M.D.	Associate Professor of Bacteriology

Instruction in special bacteriology is given in the laboratory to the students of the first year during one semester. This includes the various methods of sterilization and preparation of culture material, the study of pathogenic microorganisms of vegetable origin, and the bacteriological study of water, milk, sewage, and other such materials. The bacteriological diagnosis of the infectious diseases is also included in this course. Animal inoculations and autopsies are performed in connection with the bacteria studied and diagnoses by means of serum reactions are also given. In the third year the various animal parasites are demonstrated and the diseases produced by these organisms studied by means of gross specimens, stained sections and lantern slides. The principles of general bacteriology are taught in didactic lectures given once a week throughout the entire first year, and these lectures include the structure of bacteria, the various facts concerning their biological properties, infection and immunity.

The general principles of immunology are described in a weekly lecture to the second year class throughout the first semester and practical experiments in immunology are demonstrated to the second year class in laboratory sessions of two hours held thrice weekly throughout the first semester.

DEPARTMENT OF PHYSIOLOGICAL CHEMISTRY.

H. Boyd Wylie, M.D.	Professor of Physiological Chemistry
Frank N. Ogden, M.D.	Instructor in Physiological Chemistry

The course in Physiological Chemistry comprises laboratory work, special laboratory demonstrations, lectures and discussions of extracts prepared by students, from current literature.

Laboratory Work. The regular class work in the laboratory is carried on in two sections, throughout the year, each section spending Tuesday or Thursday morning from 9-12 in the laboratory.

During these first periods, study is directed to the chemistry of proteins, carbohydrates, fats and extractives. Later these substances are subjected to the action of enzymes, and such hydrolytic products capable of production in the laboratory are studied. Following this work, the main tissues of the body, along with its chief secretions and excretions, are investigated. The former, briefly; the latter, more thoroughly; a great deal of attention being given to the quantitative estimations of blood, urine, feces and stomach, contents.

Special Laboratory Demonstrations. These special demonstrations take place three afternoons a week, during the second semester. A group of six or eight men are assigned to the execution of the more complicated tests on blood, urine, gastric contents and feces. In this work, emphasis is laid on those tests which bear more or less on pathological conditions.

Ample opportunity is afforded, in this afternoon work, for experimentation with new methods and for reseach work.

Lectures. The lectures are given in one hour periods, for three days a week. They are designed to furnish the student with a clear understanding of the practical work, and at the same time, to supply the theoretical material necessary to complete a well-rounded course. Wherever of practical benefit to the student, the abnormal as well as the physiological aspects of the subject under discussion are always considered.

Extracts of Current Literature by Students. This department was instituted to stimulate the student's interest in the concurrent literature associated with this subject.

Periodically, during the year, students are appointed to present to the class extracts of articles of special interest from a physiological chemical standpoint. The paper thus presented is discussed by other students, previously appointed for the purpose.

MEDICAL JURISPRUDENCE.

H. J. Maldeis, M.D................Baltimore City Post Mortem Physician

Third Year. One hour each week for one semester.

Inasmuch as Medical Jurisprudence teaches the application of every branch of medical knowledge to the needs of law, civil or criminal, this course embraces the following:—Proceedings in criminal and civil prosecution; medical evidence and testimony; identity in its general relations; sexual abnormalities; personal identity; impotence and sterility; rape; criminal abortions; signs of death; wounds in their medico-legal relations; death, natural and homicidal; malpractice; insanity and medico-legal autopsies.

CLINICAL INSTRUCTION.

DEPARTMENT OF SURGERY.

Arthur M. Shipley, M.D	Professor of Surgery
Archibald C. Harrison, M.D	Professor of Surgery
Alexius McGlannan, A.M., M.D	Professor of Surgery
Joseph H. Branham, M.D	Professor of Clinical Surgery
Nathan Winslow, A.M., M.D	Clinical Professor of Surgery
Walter D. Wise, M.D	Clinical Professor of Surgery
Joseph W. Holland, M.D	Clinical Professor of Surgery
J. C. Lumpkin, M.D	Clinical Professor of Surgery
William W. Requardt, M.D	Associate Professor of Surgery

H. C. Blake, M.D	Associate Professor of Clinical Surgery
Frank S. Lynn, M.D	Associate Professor of Surgery
Elliott H. Hutchins, A.M., M.D	Associate Professor of Surgery
Thomas R. Chambers, A.M., M.D	Associate Professor of Surgery
R. W. Locher, M.D	Associate Professor of Operative and Clinical Surgery
E. H. Hayward, M.D	Associate in Surgery
Frank J. Kirby, M.D	Associate in Surgery
F. L. Jennings, M.D	Instructor in Surgery
A. M. Evans, M.D	Instructor in Surgery
E. P. Smith, M.D	Instructor in Operative Surgery
Charles Reid Edwards, M.D	Instructor in Surgery
H. M. Foster, M.D	Instructor in Surgery
E. S. Johnson, M.D	Instructor in Surgery
F. X. Kearney, M.D	Assistant in Surgery
G. W. Bowden, M.D	Assistant in Surgery
Dwight Mohr, M.D	Assistant in Surgery
Amos Hutchins, M.D	Assistant in Surgery
C. A. Reifschneider, M.D	Assistant in Surgery
Wm. R. Geraghty, M.D	Assistant in Surgery
S. Demarco, M.D	Assistant in Surgery
O. H. Lloyd, M.D	Assistant in Surgery
Clyde Marvel, M.D	Assistant in Surgery
Everard Briscoe, M.D	Assistant in Surgery

The teaching is in the Anatomical Laboratory and the dispensaries, wards, clinical laboratories and operating rooms of the University and Mercy Hospital, and in the wards and dead-house of the Municipal Hospitals at Bay View.

Instruction is given by means of lectures, recitations, dispensary work, bedside instruction, ward-classes, and clinics. The work begins in the second year, and continues throughout the third and fourth years.

Second Year.

Topographic and surgical anatomy, 15 hours a week for the first semester. The course is designed to bridge the gap between anatomy in the abstract, and clinical anatomy as applied to the study and practice of medicine and surgery.

The teaching is done in the anatomical laboratory, and students are required to demonstrate all points, outlines, and regions on the cadaver. Underlying regions are dissected when necessary to bring out outlines and relation of structures. Didactic lectures two hours weekly, augmented by demonstrations with specimens, charts, and cross-sections. Dr. Holland.

SURGICAL TECHNIQUE.

The course includes history taking, first aid treatment, demonstration of use of tourniquet and other emergency appliances and surgical dressings, bandages, plaster, adhesive plaster, suture material, solutions; their preparation and use.

It includes also non-operative therapeusis, asepsis and antisepsis, the study of circulatory and respiratory failure, preparation of patients, dummy operations and written description of operation, splints, bed frames, bone plates, grafts and local anaesthesia.

Lectures and conferences, two hours a week for one semester. Dr. Edwards.

THIRD YEAR.

Principles of surgery and general surgery, two and a half hours a week throughout the year to the entire class, lectures, recitations, and clinics. Dr. Shipley.

The class is divided into groups and receives instruction in history-taking, gross pathology, and surgical diagnosis—at the bedside and in the deadhouse of the Municipal Hospitals at Bay View. Drs. Shipley, Lynn and Dresser.

Operative Surgery. Instruction is given in operative surgery upon the cadaver and on dogs. The class is divided into sections, and each section is given practical and individual work under the supervision of the instructors. Dr. Frank S. Lynn, assisted by Drs. Locher, Hayward, E. S. Johnson, N. Winslow, Edwards, Foster, Reifschneider, Geraghty and Demarco.

Fractures and Dislocations. One hour a week for one semester. This course consists of instruction in the various forms of fractures and dislocations and their treatment, and serve as a preparatory course for clinical work. Dr. Wise.

Surgical Dispensary. Under supervision, the student takes the history, makes the physical examination, attempts the diagnosis, and, as far as possible, carries out the treatment of the ambulatory surgical cases in the University and Mercy Hospitals. Mercy Hospital—Drs. Amos Hutchins, Mohr, A. M. Evans, Wheaton, Kearney, Lloyd and Marvel. University Hospital—Drs. Edwards, E. S. Johnson and Foster.

FOURTH YEAR.

Regional Surgery. Surgery of the abdomen and abdominal wall, including hernia. Two hours a week for one semester to the entire closs. Dr. Harrison.

Surgery of the head, neck, spine, and chest. Two hours a week for one semester to the entire class. Dr. McGlannan.

Clinics. A weekly clinic will be given at the Mercy and University Hospitals to one-half the class throughout the year. As far as possible this is a diagnostic clinic. Mercy Hospital—Drs. Harrison and McGlannan. University Hospital—Dr. Shipley.

Surgical Pathology. A weekly exercise of one hour at Mercy Hospital for one semester, at which specimens from the operating-room and museum are studied in the gross and microscopically, in relation with the case history. Dr. McGlannan.

Industrial Surgery. Operative and post-operative treatment of accident cases, with instructions as to the relationship between the state, the employee, and employer, and the physician's duty to each. One hour a week to sections of the class throughout the year. Dr. Edmunds.

Clinical Clerkship. The personal study of assigned hospital patients, under supervision of the staffs of University and Mercy Hospitals, history taking, and physical examinations of patients, laboratory examinations, attendance at operations and observation of post-operative treatment.

Ward Classes. Ward class instruction in small groups, will consist of ward rounds, surgical diagnosis, treatment and the after care of operative cases. Mercy Hospital—Drs. Harrison, McGlannan, Wise, Elliott Hutchins, Evans and Locher. University—Drs. Shipley, Holland, Edmunds and Lynn.

ANAESTHESIA.

Third Year.

Lectures on the history of anaesthesia, general physiology of inhalation of anaesthetics, special physiology of each anaesthetic, methods of administration, inhalation, colonic, intravenous, complications and preventive methods, including artificial respiration and post-anaesthesia treatment of patients. One hour weekly for one semester. Dr. S. Griffith Davis.

Anaesthesia in obstetrics, one lecture. Dr. J. McF. Bergland.

Fourth Year.

During the clinics and operations before small groups, each student will be required to administer anaesthetic under the direction of an instructor. University Hospital—Drs. Queen and Moore. Mercy Hospital—Drs. Kearney and Ridgely.

DERMATOLOGY.

T. Caspar Gilchrist, M.R.C.S., L.S.A., M.D.	Professor of Dermatology
Melvin Rosenthal, M.D.	Associate Professor of Dermatology
John R. Abercrombie, A.B., J.D.	Associate Professor of Dermatology
Harry M. Robinson, M.D.	Associate in Dermatology
Joseph E. Gately, M.D.	Assistant in Dermatology

Clinical conference one hour each week to entire class. This course will consist of demonstrations of the common diseases of the skin. Dr. Gilchrist.

Dispensary instruction, University Hospital, Mondays, Wednesdays and Fridays in the diagnosis and treatment of the common skin diseases. Dr. Abercrombie. Dispensary instruction, Mercy Hospital, Dr. Rosenthal.

ORTHOPAEDIC SURGERY.

R. Tunstall Taylor, A.B., M.D.	Professor of Orthopedic Surgery
Albertus Cotton, A.M., M.D.	Professor of Orthopedic Surgery
Compton Riely, M.D.	Clinical Professor of Orthopedic Surgery
Sydney M. Cone, A.B., M.D.	Clinical Professor of Orthopedic Surgery
W. H. Daniels, M.D.	Demonstrator in Orthopedic Surgery
W. Arthur Darby, M.D.	Demonstrator in Orthopedic Surgery
H. L. Wheeler, M.D.	Demonstrator in Orthopedic Surgery

In this course didactic, clinical, bedside and out-patient instruction will be given. This instruction is provided in the University Hospital Amphitheater and Dispensary, Mercy Hospital and Dispensary and Kernan Hospital and Industrial School for Crippled Children at "Radnor Park," and in the Dispensary of same at 620 West Lombard Street.

Lectures, clinics and quizzes will be held at each of the hospitals once a week. In addition, a weekly bedside clinic will be held for small sections of the class at "Radnor Park."

The course will cover instruction in special methods and instruments required in this surgical specialty, including X-Ray technique; Wolff's law; tuberculosis of bones and joints; deformities of the feet; non-tuberculous deformities of the feet and joints; the paralyses; the bursal, tendinous and muscular conditions producing orthopedic affections; rickets; scurvy; osteomalacia; chondrodystrophies; wry-neck and the use and application of orthopedic apparatus.

ROENTGENOLOGY AND RADIOTHERAPY.

Henry J. Walton, M.D.	Professor of Roentgenology
Albertus Cotton, A.M., M.D.	Professor of Roentgenology
John Evans, M.D.	Associate Professor of Roentgenology
Charles Reid Edwards, A.B., M.D.	Instructor in Roentgenology

Instruction is given in the history, physics, and practical application of Roentgen Rays and Radium. Especial effort is made to demonstrate the use of the Roentgen Ray in diagnosis by instruction in both fluoroscopy and plate reading, one hour a week to section of the fourth year class throughout the year.

The student is also taught the practice, application of Radium and Roentgen rays as therapeutic agents. In the X-ray laboratory and in the hospital wards students are shown the use of these agents in the treatment of disease.

DISEASES OF THE THROAT AND NOSE.

Edward A. Looper, M.D.,	Clinical Professor of Diseases of the Throat and Nose
Frank Dyer Sanger, M.D.	Professor of Diseases of the Throat and Nose
George W. Mitchell, M.D.,	Associate Professor of Diseases of the Throat and Nose
George Murgatroyd, M.D.	Associate in Diseases of the Throat and Nose
Frank Anderson, M.D.	Assistant in Diseases of the Throat and Nose

Third Year. Clinical Lectures. One hour each week throughout the session. Drs. Looper and Sanger.

Fourth Year. Dispensary instruction daily in small sections at the University and Mercy Hospitals. Ward classes one hour each week at the University and Mercy Hospitals.

GENITO-URINARY DISEASES.

Anton G. Rytina, A.B., M.D.	Professor of Genito-Urinary Diseases
Page Edmunds, M.D.	Clinical Professor of Genito-Urinary Diseases
A. J. Underhill, A.B., M.D.	Clinical Professor of Genito-Urinary Diseases
Harris Goldman	Associate in Genito-Urinary Diseases
A. J. Gillis, M.D.	Instructor in Genito-Urinary Diseases
W. H. Toulson, M.D.	Instructor in Genito-Urinary Diseases
L. K. Fargo, M.D.	Assistant in Genito-Urinary Diseases

Instruction in Genito-Urinary Surgery is given to the members of the senior class, from both a practical and didactic standpoint. The course includes everything pertaining to modern urology, such as urethroscopy, cystoscopy, ureter catheterization, renal functional tests, X-ray, pyelography, blood urea estimations, etc. The teaching consists of clinics in the amphitheatre, ward rounds, and attendance by members of the senior class upon out-patients in the dispensary. In the latter department there were about 30,000 visits made during the past year, and ample facilities are afforded the students to see a large variety of every type of venereal disease. They are first instructed in the method of taking a genito-urinary history, are shown the technique of urethroscopy, cystoscopy, urethral instrumentation, rectal massage, demonstrations of the spirochaete pallida, and administration of Salvarsan.

DISEASES OF THE COLON AND RECTUM.

G. Milton Linthicum, A.M., M.D.,
Professor of Diseases of Rectum and Colon
Charles F. Blake, M.D.......Professor of Diseases of Rectum and Colon
J. Dawson Reeder, M.D.,
Associate Professor of Diseases of Rectum and Colon

Fourth Year. This course is for instruction in diseases of the Colon, Sigmoid Flexure, Rectum and Anus.

One lecture a week throughout the first semester will be given in the Clinical Amphitheater of the Hospitals. The lecture will cover the essential features of the Anatomy and Physiology of the large intestine; as well as the various diseases to which it is subject. The importance of diseased conditions and malpositions of the intestines, in relation to systemic disturbances, will be emphasized by demonstrations.

In small groups, the students will be taken into the wards and dispensaries of the University and Mercy Hospitals, where different phases of the various diseases will be taught by direct observation and examination. The use of the proctoscope and sigmoidoscope in examination of the rectum and sigmoid will be made familiar to each student.

A course in Proctoscopy may be given in the City Hospitals at Bay View, where abundance of material is always obtainable.

DEPARTMENT OF MEDICINE.

Gordon Wilson, M.D	Professor of Medicine
Cary B. Gamble, Jr., A.M., M.D	Professor of Medicine
Standish McCleary, M.D	Professor of Clinical Medicine
Jos. E. Gichner, M.D	Professor of Clinical Medicine
Charles W. McElfresh, M.D	Professor of Clinical Medicine
G. Carroll Lockard, M.D	Professor of Clinical Medicine
Harvey G. Beck, M.D., Sc.D	Professor of Clinical Medicine
Hubert C. Knapp, M.D	Associate Professor of Medicine
C. C. W. Judd, A.B., M.D	Associate Professor of Medicine
H. D. McCarty, M.D	Associate Professor of Medicine
Wm. H. Smith, M.D	Associate in Clinical Medicine
R. C. Metzel, M.D	Associate in Clincial Medicine
W. I. Messick, M.D	Associate in Clinical. Medicine
E. E. Mayer, M.D	Instructor in Medicine
George McLean, M.D	Instructor in Medicine
D. Corbin Streett, M.D	Instructor in Medicine
C. C. Habliston, M.D	Instructor in Medicine
Harry M. Stein,	Instructor in Medicine
Martin Sloan	Instructor in Medicine
Horace Byers, M.D	Assistant in Medicine
H. R. Lickle, M.D	Assistant in Medicine
Wm. Michael, M.D	Assistant in Medicine
G. L. Zimmerman, M.D	Assistant in Medicine
B. T. Baggott, M.D	Assistant in Medicine
J. W. Martindale, M.D	Assistant in Medicine

CLINICAL MEDICINE.

Third Year. Lectures and recitations on the principles of medicine, for three hours a week throughout the session. Clinical conference, one hour each week throughout the session.

Fourth Year. Lectures, recitations and clinics to the entire class four hours a week throughout the session.

A clinical pathological conference is held once a week throughout the session, at which the material obtained at autopsy is studied in relation to the clinical findings.

The whole class, divided between the two hospitals and again subdivided into small groups, receives beside instruction twelve hours a week throughout the session and has the care of the hospital patients under the direct supervision of the hospital staff taking all histories, making the physical examinations, doing requisite laboratory tests, following and recording the progress of the disease in the individual patient.

PHYSICAL DIAGNOSIS.

Second Year. Didactic lectures and practical demonstrations in the medical topography and the physical conditions in health, preparatory to the course in physical diagnosis in the third year. Two and one-half hours each week during one semester.

Third Year. The class is divided into small groups, and each section receives instruction for the entire session in the medical dispensaries of the hospitals. During the second semester the students under the supervision of instructors examine and treat patients in the medical dispensaries. During one semester small groups are sent for the afternoon to the city hospitals at Bay View for special instruction in history taking and physical diagnosis. Two hours a week throughout the year are devoted to physical diagnosis. Full class conferences one hour a week throughout the session.

THERAPEUTICS.

Third Year. This course is supplementary to that on clinical medicine, and an effort is made to familiarize the student with the practical treatment of disease. The course is divided into general therapy, specific therapy and physical therapy. Two and one-half hours per week throughout the year is devoted to these branches.

Fourth Year. Special consideration is given to the practical application of therapeutic principles in bedside teaching.

TUBERCULOSIS.

A practical course is given in the tuberculosis dispensary and at the Municipal Tuberculosis Hospital to small groups, the abundance of material, both of "incipient" and "advanced cases," making this course of value in the practical recognition of the physical signs of the disease.

GASTRO-ENTEROLOGY.

Julius Friedenwald, A.M., M.D	Professor of Gastro-Enterology
John C. Hemmeter, M.D., Ph.D., Sc.D., LL.D.	Professor of Clinical Medicine
T. Fred. Leitz, M.D	Clinical Professor of Gastro-Enterology
E. B. Freeman, B.S., M.D	Clinical Professor of Gastro-Enterology
J. Harry Ullrich, M.D	Associate in Gastro-Enterology
Theodore Morrison, M.D	Associate in Gastro-Enterology
Maurice Freeman, M.D	Instructor in Gastro-Enterology
Joseph Sindler, M.D	Assistant in Gastro-Enterology

Fourth Year. Clinic recitations and demonstrations to each half of the class for one hour a week throughout the session. Dispensary instruction to small groups throughout the entire session. Practical instruction in the wards in the differential and clinical diagnosis and demonstrations of the newer methods of diagnosis in gastro-intestinal affections.

PEDIATRICS.

John Ruhrah, M.D	Professor of Pediatrics
Charles L. Summers, M.D	Professor of Pediatrics
Edgar B. Friedenwald, M.D	Clinical Professor of Pediatrics
C. Loring Joslin, M.D	Instructor in Pediatrics
W. H. Ingram, M.D	Assistant in Pediatrics
John S. Fenby, M.D	Assistant in Pediatrics
J. F. Hawkins, M.D	Assistant in Pediatrics
Howard H. Warner, M.D	Assistant in Pediatrics
John Houff, M.D	Assistant in Pediatrics
B. J. Ferry, M.D	Assistant in Pediatrics
William J. Todd, M.D	Assistant in Pediatrics
Percy P. Hardt, M.D	Assistant in Pediatrics
John H. Traband, M.D	Assistant in Pediatrics
C. R. Goldsborough, M.D	Assistant in Pediatrics

Third Year. Lectures and recitations to the entire class one hour weekly throughout the year.

Fourth Year. Lectures and recitations one hour weekly to the entire class. Also a weekly clinical lecture is given throughout the year, where the character of disease is fully demonstrated and the students, in groups, are given opportunity for personal examination of cases.

In addition, during this year the students, in groups, attend the Children's dispensary daily, and are here given the opportunity to examine all cases under the supervision of competent instructors.

NEUROLOGY.

Irving J. Spear, M.D	Professor of Neurology
Andrew C. Gillis, A.M., M.D	Professor of Neurology
G. M. Settle, A.B., M.D	Associate Professor of Neurology
Benjamin Pushkin, M.D	Instructor in Neurology
J. A. Skladowsky, M.D	Assistant in Neurology

Third Year. Lectures and recitations two hours each week to entire class throughout one semester. This course comprises the study of the anatomy and physiology of the nervous system, the method of neurological examination, and relationship of signs and symptoms to pathological conditions. The material at the University and Mercy Hospitals is available.

Fourth Year. Clinical lectures and recitations, one hour each week throughout the entire session.

Clinical Conference, one hour each week to the entire class. This subject is taught at the University and Mercy Hospitals. All cases presented at these clinics are carefully examined; complete written records are made by the students who demonstrate the cases before the class. These cases are usually assigned one or two weeks before they are presented, and each student in the class must prepare one or more cases during the year.

Ward Class Instruction. In small sections, two hours each week during the entire year at the University and Mercy Hospitals. In these classes the students come in close personal contact with the cases in the wards under the supervision of the instructor.

Dispensary Instruction. Small sections are instructed in the dispensaries of the University and Mercy Hospitals four afternoons each week. In this way students are brought into contact with nervous diseases in their earlier as well as later manifestations.

Electro Therapeutics. Instruction in the uses of the various types of electrical apparatus is given by lectures and demonstrations in the clinics, the ward classes, and the out-patient department.

PSYCHIATRY.

R. M. Chapman, M.D. .... Associate Professor of Phychiatry
G. F. Sargent, M.D .... Associate in Clinical Psychiatry

Fourth Year. This subject is taught by means of didactic and clinical lectures. Abundant material is at the command of this department in the various institutions which are presided over by the teachers in psychiatry. The student is brought into contact with the early manifestations of mental disease in the dispensaries of the University and Mercy Hospitals, and in a series of clinics opportunity is afforded to observe the course and later manifestations of the disease, often in these same patients, at the Sheppard-Enoch Pratt Hospital, Mount Hope Retreat, and City Detention Hospital.

HYGIENE AND PREVENTIVE MEDICINE.

C. Hampson Jones, M.D., C.M.	Professor of Hygiene and Public Health

Third and Fourth Years. In each year one lecture every week to the entire class throughout the session. A quiz will be substituted for a lecture whenever it is considered advantageous to do so. The lectures to the third year class will encompass all of the fundamental subjects, air, water, soil, food, disposal of wastes. etc.. leading to the fourth year, when communicable diseases of all kinds will be considered in groups and singly. State and Federal laws to promote and protect public health will be considered during the presentation of groups of diseases.

DEPARTMENT OF OBSTETRICS.

J. M. H. Rowland, M.D	Professor of Obstetrics
L. E. Neale, A.M., M.D., LL.D	Professor of Obstetrics
Bernard Purcell Muse, M.D	Professor of Clinical Obstetrics
Charles E. Brack, M.D	Clinical Professor of Obstetrics
J. McF. Bergland	Associate in Obstetrics
L. H. Douglass, M.D	Associate in Obstetrics
F. H. Machin, M.D	Assistant in Obsterics
J. G. M. Reese, M.D	Assistant in Obstetrics
Susanne R. Parsons, A.M., M.D., Ph.D	Assistant in Obstetrics

Third Year. Lectures and recitations two hours each week by Drs. Neale and Rowland to entire class. Special obstetric and gynecologic pathology three hours each week under the direction of Dr. Gardner to class sections in the Pathologic Laboratory. Clinical Obstetrics (bedside and manikin work) three hours each week at the University Hospital by Dr. Neale and his assistants, and at the Mercy Hospital by Dr. Brack.

Examinations, one at the end of first semester and final one at end of the year. The results of these examinations, considered in conjunction with the student's practical work, will determine the grade for the year's work, which grades, if sufficient to give student advanced standing, will count as one-half of the final grade in Obstetrics.

Fourth Year. *Lectures and Clinical Conferences.* Two hours each week to the entire class. Drs. Neale and Rowland.

Ward Classes and Operative Obstetrics (Manikin work). Four hours each week to sections of the class. Dr. Douglass.

Students are required to attend obstetric cases before, during and after confinement in the University Hospital, as well as in the out-patient department. Each student is required to conduct and make accurate records of at least twelve confinement cases. These out-patient cases are conducted under the supervision of post-graduate instructors, two in number, who devote their whole time to this work.

Mid-year and final examinations will be held, the results of which, considered in conjunction with clinical work and recitations, will make up the remaining half of the final grade.

This School is peculiarly fortunate in the clinical material available for this important branch of medical teaching; 1,250 cases in the hospital and out-patient department make a practical inexhaustible clinic.

DEPARTMENT OF GYNECOLOGY.

William S. Gardner, M.D	Professor of Gynecology
J. Mason Hundley, M.D	Professor of Clinical Gynecology
Hugh Brent, M.D	Associate Professor of Gynecology
Abraham Samuels, M.D	Associate Professor of Gynecology
Geo. A. Strauss, M.D	Associate in Gynecology
R. G. Willse, M.D	Associate in Gynecology
T. K. Galvin, M.D	Assistant in Gynecology
Jack M. Hundley, M.D	Assistant in Gynecology

Third Year. *Didactic Work.* A *course* of twenty lectures and recitations in the second semester. Dr. Hundley.

Laboratory. Special pathology, both gross and microscopical, studied in connection with the clinical history of each patient from which the specimen was derived, two hours each week during the first semester. Drs. Gardner, Strauss, Samuels, Brent, Galvin and Jack M. Hundley.

Fourth Year. *Didactic Work.* Lectures and recitations, one hour each week throughout the session. Dr. Gardner.

Clinical Work. Six hours weekly for one trimester. In this course a student writes the clinical history of each patient in the ward, makes a general physical examination, including the blood and urine, before the patient is brought before the class. One student under supervision gives the anesthetic, a pelvic examination is made by six students, and any operation required is then done before a section of the class small enough to see clearly what is being done and how it is done. On a subsequent day the whole group examine microscopically sections prepared from material removed from patients that have been before them.

DEPARTMENT OF OPHTHALMOLOGY AND OTOLOGY.

Harry Friedenwald, A.B., M.D.	Professor of Ophthalmology and Otology
J. W. Downey, M.D.	Clinical Professor of Otology
Clyde A. Clapp, M.D.	Associate Professor of Ophthalmology and Otology
H. K. Fleck, M.D.	Associate in Ophthalmology and Otology
Joseph I. Kemler, M.D.	Associate in Ophthalmology and Otology
M. Randolph Kahn, M.D.	Associate in Ophthalmology and Otology
E. A. Knorr, M.D.	Associate in Ophthalmology and Otology

Third Year. *Course in Refraction and in the External Diseases of the Eye*, once weekly, October to December. Dr. Clapp.

Courses in the Diseases of the Ear, twice weekly, October to December. Dr. Downey.

Practical Courses in Ophthalmoscopy, once weekly, in sections. Drs. Fleck and Kemler.

Fourth Year. *Course in Diseases of the Eye*, once weekly during year. Dr. Harry Friedenwald.

Clinics in Diseases of the Eye and the Ear, weekly. Drs. Harry Friedenwald and Downey.

Dispensary Instruction, elective course daily in small sections.

The courses in Ophthalmology and Otology are designed to familiarize the students with the common diseases of the eye and ear, their recognition and treatment, with a view to meet the needs of the general practitioner. Special emphasis is laid upon the relation between diseases of the eye and the ear and systematic diseases of other organs.

LABORATORIES OF CLINICAL PATHOLOGY.

John Lutz, M.D.	Associate Professor of Clinical Pathology
Henry L. Collenberg, M.D.	Associate in Clinical Pathology
L. A. M. Kraus, M.D.	Assistant in Clinical Pathology

During the third year the student is thoroughly drilled in the technique of the usual clinical laboratory work, so that he is able to perform all routine examination which may be called for during his fourth year, in connection with the work in the wards and dispensary. In addition he is trained to do bacteriological and serological work as will fit him to occupy an assistant's position in a civil hospital laboratory where modern public health and epidemiological work is carried on.

The practical work is supplemented by a series of didactic lactures and demonstrations in which the entire teaching staff of the department takes an active part. The microscopical, chemical, bacteriological and serological study of blood, exudates and transudates, gastric juice, feces and urine are successively taken up, and special attention directed to the clinical significance of the findings.

Clinical parasitology and advanced bacteriology, both from the standpoint of the infecting agent and the carrier, are given careful consideration.

The entire course is thoroughly practical. Each student is provided with a microscope, blood counters and hemoglobinometer for his exclusive use, and every two students with a special laboratory outfit for all routine purposes.

During the fourth year the student applies what he has learned during the preceding year in the laboratories of the various affiliated hospitals. He is also supplied with a laboratory outfit which is sufficiently complete to enable him to work independently of the general equipment. Special instructors are available during certain hours to give necessary assistance and advice.

FIRST YEAR SCHEDULE—FIRST SEMESTER.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 9 to 10.	Histology and Embryology Laboratory.				Bacteriology	Dissecting.
10 to 11.					Embryology.	
11 to 12.	Physiology.	Histology.	Physiology.	Histology.	Physiology.	
P. M. 12 to 1.	Lunch and Transfer Period.					
1 to 4.	Anatomy and Dissecting.					

Classes in Anatomy and Dissecting at Lombard and Greene Streets; all other classes at Streets; all other classes at Calvert and Saratoga Streets.

FIRST YEAR SCHEDULE—SECOND SEMESTER.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 8.30 to 9.30.	Histology and Embryology Laboratory.				Bacteriology	Dissecting.
9.30 to 10.30.					Embryology.	
10.30 to 11.30.	Physiology.	Histology	Physiology.	Preliminary Physiological Chemstry.	Physiology.	
11.30 to 12.00.	Lunch.					Immunology and Serology (11.30- to 12.30).
P. M. 12 to 2.	Bacteriology. Laboratory.					
2 to 2.30.	Transfer Period.					
2.30 to 5.30.	Anatomy and Dissecting.					

Classes in Anatomy and Dissecting, and in Immunology and Serology at Lombard and Greene Calvert and Saratoga Streets.

SECOND YEAR SCHEDULE—FIRST SEMESTER.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
A. M. 8.30 to 9.30.	Physiology.	Laboratory: Physiology, Section A. Physiological Chemistry, Section B.	Physiology.	Laboratory: Physiology, Section B. Physiological Chemistry, Section A.	Physiology.	
9.30 to 10.30.	Physiological Chemistry.		Physiological Chemistry.		Physiological Chemistry.	Pharmacology
10.30 to 11.30.	Pathology.		Pharmacology		Pathology.	Pathology.
11.30 to 12.30.	Pharmacology	Lunch and Transfer Period.				Immunology and Serology.
P. M. 12.30 to 1.30.	Lunch.	Immunology and Serology	Immunology and Serology	Surgery.	Surgery.	
1.30 to 2.30.	Pharmacology Laboratory.	Laboratory.	Laboratory.	Medicine.	Medicine.	
2.30 to 3.30.				Surgical Anatomy.	Surgical Anatomy.	
3.30 to 4.30.		Surgical Anatomy.	Surgical Anatomy.			
4.30 to 5.30						

Classes on Tuesdays, Wednesdays, Thursdays and Fridays from 12.30 to 5.30, at Calvert and Saratoga Streets; all other classes at Lombard and Greene Streets.

SECOND YEAR SCHEDULE—SECOND SEMESTER.

A. M. 8.30 to 9.30.	Physiology.	Laboratory: Physiology, Section A. Physiological Chemistry, Section B.	Physiology.	Laboratory: Physiology, Section B. Physiological Chemistry, Section A.	Pharmacology	Physiology.
9.30 to 10.30.	Physiological Chemistry.		Physiological Chemistry.		Physiological Chemstry.	Pharmacology
10.30 to 11.30.	Pathology.		Pharmacology		Pathology.	Pathology.
11.30 to 12.00.	Lunch.					Medicine (11.30 to 12.30).
P. M. 12 to 2.	Pathology. Laboratory.					
2.00 to 5.00.	Laboratory: Pharmacology Section A. Physiological Chemistry, Secton B.	Laboratory: Pharmacology Section A. Physiology, Section B.	Electives.	Laboratory: Pharmacology Section B. Physiology, Section A.	Laboratory. Pharmacology Section B. Physiological Chemistry, Section A.	

All classes at Lombard and Greene Streets.

THIRD YEAR SCHEDULE.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 8.30 to 9.30.	Medicine.	Pathology.	Therapeutics.	Surgery.	Pathology.	Surgery.
9.30 to 10.30	Pediatrics.	Surgery.	Obstetrics.	Medicine.	Therapeutics.	Medicine.
10.30. to 1.30.	Physical. Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer	Physical Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis Operative Surgery. Dispensary. Lunch and Transfer.
P. M. 1.30 to 2.30.	Medical Clinic.	Obstetrics.	Neurology. (first semester). Gynecology (second semester).	Obstetrics	Neurology (first semester).	Clinical Medicine and Surgery Gross Pathology at Bay View.
2.30 to 3.30.	Pathology Laboratory	Pathology. Laboratory.	Gynecology Laboratory (second semester). Legal Medicine (first semester).	Clinical Pathology Laboratory	Clinical Pathology Laboratory	
3.30 to 4.30			Gynecology Laboratory (second semester). Anaesthesia (first semester).			
4.30 to 5.30.	Eye and Ear—October 3 to December 21. (Examination, December 21.) Physical Therapeutics—January 9 to February 15. (Examination, February 15.) Nose and Throat—February 20 to April 25. (Examination, April 25.)			Physical Diagnosis	Practical Obstetrics Ophthalmoscopy	

From 10.30 A. M. to 1.30 P. M. the class is divided into two sections, one section reporting at Calvert and Saratoga Streets, the other at Lombard and Greene Streets.

Classes on Wednesdays, Thursdays and Fridays from 1.30 to 5.30 at Calvert and Saratoga Sts.

Proctology—Wednesdays and Fridays, 1.30 to 2.30, for ten lectures, April 11 to May 12, inclusive.

FOURTH YEAR SCHEDULE.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 9.00 to 11.00.	Ward Classes Medicine, Surgery, Obstetrics.	Ward Classes Medicine, Surgery, Gynecology.	Ward Classes Medicine, Obstetrics. X-Ray, 9-10. Surgery, 10-11.	Ward Classes Medicine, Surgery Gynecology.	Ward Classes Medicine, Surgery. Proctology.	Ward Classes Medicine, Surgery, Gynecology.
11.00 to 12.00.	Orthopedic Surgery.	Medical Clinic (University) Surgical Path. (Mercy)	Clinical Pathological Conference.	Surgical Clinic.	Medical Clinic.	Pediatrics Clinic.
P. M. 12.00 to 2.00.	Dispensary Lunch and Transfer	Dispensary and Lunch	Dispensary and Lunch and Transfer	Dispensary and Lunch	Dispensary and Lunch	Dispensary and Lunch
2.00 to 3.00.	Dermatology Clinic (Full class at Univ. Hosp.)	Neurology Clinic	Eye and Ear Clinic Full class at Univ. Hosp.	Genito-Urinary Clinic	Gastro-Enterology Clnic	Psychiatry Clinic
3.00 to 3.30.		Transfer.		Transfer.	Transfer.	
3.30 to 4.30.	Pediatrics.	Surgery.	Obstetrics.	Surgery.	Neurology.	
4.30 to 5.30.	Medicine.	Eye.	Medicine.	Gynecology.	Hygiene and Prev. Medicine.	

The Senior class is divided into two sections, which report, one at Lombard and Greene Streets, the other two at Calvert and Saratoga Streets, for one semester each, then rotate at the end of the first semester on January 28, 1922.

Each section of the class is divided into three groups—Medical, Surgical and Special. These groups will rotate on the following dates:

FIRST SEMESTER.	SECOND SEMESTER.
1st period, Oct. 3 to Nov. 5.	1st period, Jan. 30 to Mch. 4.
2nd period, Nov. 7 to Dec. 10.	2nd period, Mch. 6 to Apr. 8.
3rd period, Dec. 12 to Jan. 28.	3rd period, Apr. 10 to May 13.

The schedules are identical for both sections, except as noted on Mondays, from 2 to 3 P. M., and on Tuesdays from 11 A. M. to 12 noon.

All lectures from 3.30 to 5.30 P. M. are to be attended at Lombard and Greene Streets

THE UNIVERSITY HOSPITAL TRAINING SCHOOL FOR NURSES.

MISS LUCY ANN MARSHALL, *Superintendent of Training School.*

The University of Maryland School for Nurses, established in the year 1889 for the purpose of instructing women in the art of caring for the sick, is now entering its thirty-second year.

The University Hospital is a large general hospital containing about 250 beds, and is equipped to give young women a thorough course of instruction and practice in all phases of nursing work.

Unusual advantages are offered to student nurses because of the varied services and well-thought-out curriculum, taught by qualified instructors and members of the Medical Staff of the University.

The Nurses' Home, while not a new building, has been recently renovated and is comfortable and cheerful.

Candidates wishing to obtain the course of instruction must apply personally or by letter to the Superintendent of Nurses. Those applying by letter should enclose a statement from a clergyman testifying to good moral character, and one from a physician certifying to sound health and unimpaired faculties. No candidate will be considered who is not physically fit. Applicants must not be under 19 or over 35 years of age. They must show that they have graduated from a high school or have the equivalent of such a degree of education. The Superintendent of Nurses decides as to the fitness of the candidate for the work and the propriety of dismissing or retaining them at the end of their probation term. She may also, with the approval of the Committee, dismiss a pupil from the school at any time for misconduct or inefficiency.

The course of instruction covers a period of three years.

Classes are admitted in February and March and September. Student Nurses are on duty eight hours during the day, and ten hours when on night duty, except during the first six weeks of the preliminary period, when four hours are spent in the wards and four hours in the classroom.

When the work will permit a half day is allowed on Sunday. The term of night duty is two months during each year.

Sickness: Pupils when ill will be cared for gratuitously. All time lost for sickness or any other cause must be made up.

Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

Allowances: Students are allowed $10.00 each month, after the first three months, to defray the expenses incidental to her training, uniforms, etc. Students receive lodging, board and a reasonable amount of laundry work from date of entrance. Students receive $15.00 per month during their second year and $20.00 per month during their senior year. Sufficient books for students' use are supplied by the hospital.

Vacations: Vacations are given between June and September. A period of three weeks is allowed the student after the completion of the first and second years.

Examinations: Examinations are held after each course of study and lectures, and the standing of the student at the end of the year is based upon the results of these examinations and the general character of the work throughout the year.

The diploma of the school will be awarded to those who have satisfactorily completed the full term of three years and have passed successfully the final examinations.

Graduates University Hospital, Class 1921.

Student	Address
Mary Belle McDaniel	Maryland
Susan Pauline Neady	Pennsylvania
Christine Minnis	Pennsylvania
Zadieth Violet Reese	Maryland
Ruby Lee Reister	North Carolina
Claribel Hampton	North Carolina
Anna Elizabeth Woods	Maryland
Jessie Geraldine Rhodes	North Carolina
Louise Lee Bateman	Maryland
Kate Womack Hogshead	North Carolina
Mary Cutter Fisher	Maryland
Norma Lavada Gaver	Maryland
Ruth Elizabeth Gorman	Maryland
Helen Eugenie Reamy	Virginia
Helen Margaret Childs	Maryland
Blanche Lee Martin	North Carolina
Isabelle Jean Hanna	Maryland
Julia Rebecca Smith	Maryland

THE MERCY HOSPITAL TRAINING SCHOOL FOR NURSES.

The Mercy Hospital Training School for Nurses, conducted by the Sisters of Mercy and connected with the College of Physicians and Surgeons, was organized and incorporated under the general laws of the State of Maryland in 1899. Its first students were graduated in 1901; and on the passage of the bill for registration in 1904 the Sisters of Mercy, connected with the Hospital service, received certificates as registered nurses.

The Training School was affiliated with the Board of Regents of the State of New York in 1906; and in the same year the Alumnae Association was incorporated, having been previously connected with the Associated Alumnae of the United States. The graduates, as active members, have been much interested in the movements of the Maryland Association of Graduate Nurses, to whom they have given every encouragement to uplift the profession in its many works of district nursing, tuberculosis campaign, Red Cross movements, etc.

The requirements for entrance are: Highest moral standing, health, intelligence and a High School education or its equivalent. The age limit is twenty to thirty-five years.

After a three months' probation, candidates, if they possess the necessary qualifications, are admitted to the Training School proper, receiving five dollars a month wherewith to secure textbooks, etc., the education they receive being considered their compensation. The right is reserved to dismiss pupils for any cause which may be deemed sufficient by the Sister Superior or Superintendent.

The course of training comprises three years of theory and practice. The clinical advantages are exceptional. The medical, surgical, orthopedic, gynecological, obstetrical, children's and dietetic departments give valuable practical experience. The nurses are taught the theory of nursing by class recitations and demonstrations by efficient Sister instructors. Supplementing this training is a course of lectures from the professors of the University of Maryland School of Medicine and College of Physicians and Surgeons, who are untiring in their efforts to keep the School abreast with modern scientific developments.

Graduates, 1921.

Name	Address
Sister Mary Consilia	Arkansas
Anne Marie Baker	West Virginia
Katherine Ann Blickenstaff	Maryland
Dorothy Mae Chenoweth	Maryland

Ella Clatterbuck	Pennsylvania
Sabina P. Concannon	Maryland
Rachael Darby	Pennsylvania
Kathryn Marie Dowling	Pennsylvania
Mary Agnes Dunnigan	Maryland
Frances Esther Hatfield	Maryland
Beatrice Frances Hilton	Pennsylvania
Mary Adeline Hoffnagle	Pennsylvania
Mary Genevieve Keefer	Pennsylvania
Anna Catherine Lavell	Massachusetts
Ruth Woodring Lykens	Pennsylvania
Mary Virginia McKay	Maryland
Martha Evelyn Newman	Maryland
Henrietta Marie O'Flynn	New York
Elizabeth Marie Oswald	Pennsylvania
Mary Helen Rathbone	West Virginia
Georgie Cecelia Reid	Maryland
Eileen Ann Rice	Pennsylvania
Agnes Eleanor Ryan	West Virginia
Isabelle Schultz	West Virginia
Billie A. Sharpe	West Virginia
Lexavae Stanley	West Virginia
Ruth Ellen Stigers	Maryland
Nathalie E. Vetra	Maryland
Maude Cecelia Walbert	Maryland
Horace A. Wilson	Maryland

ENDOWMENT FUND.

The following, all Alumni of the University, constitute the Board of Trustees of this Fund:

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Arthur M. Shipley, M.D.

This Board is incorporated by act of the Legislature of the State, its legal title being "The Trustees of the Endowment Fund of the University of Maryland," and is independent and self-perpetuating, filling itself any vacancies. Its powers are limited *to the expenditure of the interest derived from the fund,* which is to be applied in the discretion of the Board for the benefit of the University. Contributions, donations and bequests are solocited from Alumni and friends. They may be made to the general or University Fund, to the Medical Fund or to any other department of the University. If intended for the School of Medicine, they may be given to the general medical fund or to some special object, as building, research, library, pathology, hospital, publication, laboratories, gymnasium, scholarship, medal, prize, etc., in which case the wishes of the donor will be strictly regarded. Attention is invited to the "Charles Frick Research Fund," already established in memory of that distinguished investigator. Checks should be made payable to B. Merrill Hopkinson, M.D., Treasurer, Professional Building, Baltimore, Md.

FORMS OF DEVISE OR BEQUEST.

To School of Medicine.

I give, devise and bequeath to the Regents of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic...

(Here state amount or describe property.)

To Endowment Fund.

I give, devise and bequeath to the Trustees of the Endowment Fund of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic...........

(Here state amount or describe property.)

ALUMNI ASSOCIATION.

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W. J. Todd, M.D.

YOUNG MEN'S CHRISTIAN ASSOCIATION OF THE UNIVERSITY OF MARYLAND.

The Y. M. C. A., since its establishment twenty-one years ago, has had a splendid influence in helping to mould the character of the students at the University.

All students in each department of the University are eligible to active or associate membership. Membership in the University Association entitles the holder to special privileges in the City Association. Bible and Mission Study Classes and Social Service Work are promoted by the Association and every effort is exerted to build morality and strong Christian character.

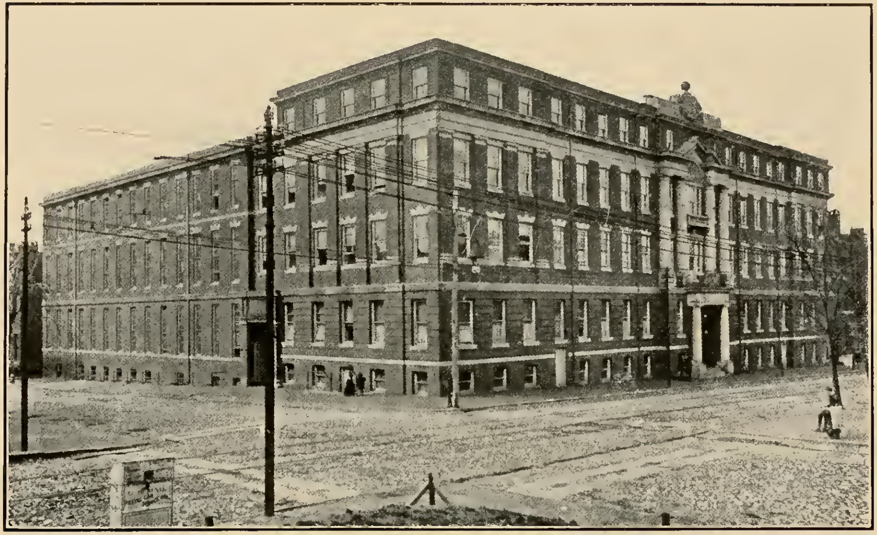
A committee will be on hand in Davidge Hall at the opening of the session to welcome all new students to the University. This committee will be glad to render assistance in securing comfortable rooms and boarding houses, and will extend every other courtesy possible. Each new student will be handed a copy of the handbook, a publication issued by the Y. M. C. A., containing valuable information.

All young men who intend to enter the University are cordially invited to share in the privileges and work of the Association.

The officers named will be glad to furnish any information desired in regard to the Association, and will be glad to render any assistance. Correspondence should be addressed to the president, William Hollister.

INDEX

Alumni Association. 77
Annual Appointments. 36
Board of Instruction. 6
Board of Regents. 4
Calendar. 2
Consolidation of Schools. 27
Curriculum. 45
Dispensaries. 33
Dispensary Staffs:
  Mercy Hospital. 16
  University Hospital 12
Expenses, Students'. 44
Fees. 41
Graduates. 25
Hospitals:
  Franklin Square. 30
  James Lawrence Kernan. 32
  Maternity Hospital of the University of Maryland. 30
  Mercy Hospital. 29
  Mount Hope Retreat for the Insane 32
  Municipal Hospital. 31
  Sheppard and Enoch Pratt Hospital for the Insane, The. 32
  St. Vincent's Infant Asylum. 32
  University Hospital. 28
  West End Maternity. 31
Laboratories:
  Anatomical. 34
  Clinical Pathology. 35
  Histology and Embryology. 35
  Pathology and Bacteriology. 35
  Physiology. 34
  Physiological Chemistry. 35
  Pharmacology. 49
Libraries. 36
Matriculates. 22
Medical Council. 5
Postgraduate Students. 40
Prizes. 42
Prizemen. 26
Requirements for Matriculation. 37
Rules. 41
Schedule. 68
Scholarships. 43
Special Courses. 42
Staffs:
  City Hospital at Bay View. 20
  James Lawrence Kernan Hospital. 18
  Mercy Hospital. 13
  Nursery and Child's Hospital. . . . 21
  St. Elizabeth Home. 20
  St. Vincent's Infant Asylum. 21
  University Hospital. 10
Training School for Nurses:
  Mercy Hospital. 74
  University Hospital. 72
University Council. 4
University of Maryland, Organization of. 3
Young Men's Christian Association. . 77



UNIVERSITY HOSPITAL.

COLLEGE OF PHYSICIANS AND SURGEONS AND MERCY HOSPITAL.

UNIVERSITY OF MARYLAND
BULLETIN
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REPORT OF TWO CASES OF SYPHILIS SIMULATING EPITHELIOMATA.

By H. M. Robinson, M.D.

When one engages in dermatological work, it is comparatively common to meet with chronic ulcerative lesions of the face, a definite diagnosis of which can be made only with difficulty. Often because of the fact that syphilitic lesions can assume such various aspects, and among other ulcers can imitate so closely epitheliomata, a complement-fixation or therapeutic test, or microscopic examination, is necessary to determine the diagnosis.

Since, by far (90%), the commonest of the chronic ulcers of the face are lues and epitheliomata, the emphasis should be laid upon the chief diagnostic points of these two diseases. Typical cases illustrating this difficulty of diagnosis are here recorded, with photographs.

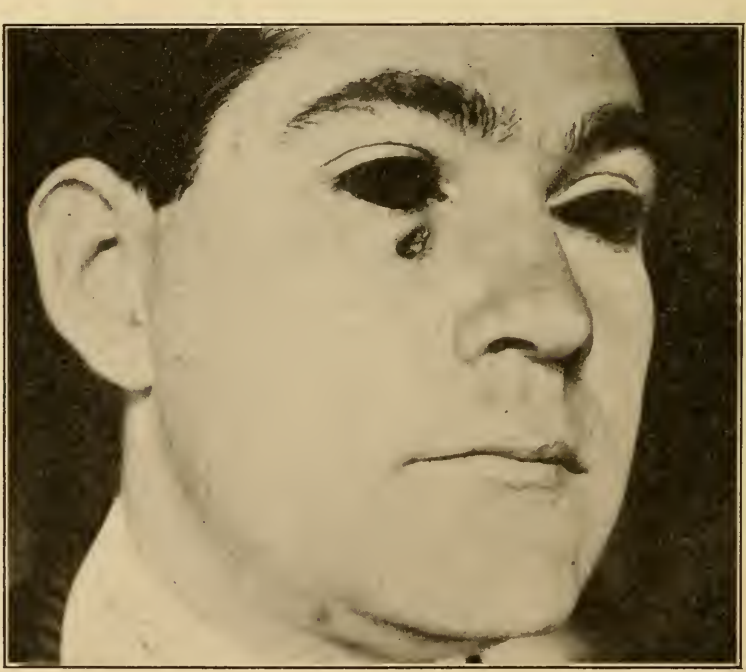
1. Case of Gumma simulating Epithelioma.

A. E. P.; aged 30; married; white; male; American born; chemist by profession. He denies any exposure to venereal infection before marriage, and any disease of the genitalia at any time.

History of Eruption—One year after marriage, there appeared a small pea-sized nodule on the face about half an inch below the right lower eyelid. The lesion remained the same for about two months, when it became soft and was opened by his wife with a needle. A brownish fluid oozed out and in a few days an ulcer was formed, which retained its original size and shape till his first visit for treatment, three weeks later. Since the ulcer formed there has been no discharge or bleeding. There was slight pain at times.

Physical Examination—No scars nor other eruption can be found on the body other than the present lesion. A thorough search was made for the remains of an initial lesion on the penis, but none was found. Half an inch below the right lower eyelid, there is a large bean-sized, oval ulcer, one quarter by one-half inch in diameter. When first seen, the lesion had a dark brownish crust, the removal of which exposed a clean-cut ulcer. This ulcer had a reddish, ragged, irregular base, with a small amount of grayish exudate. Edges were slightly indurated; depth was about one-eighth of an inch.

A definite diagnosis could not be made on clinical grounds only. A basal cell epithelioma seemed to be the most probable diagnosis, yet syphilis as a cause could not be ruled out. The history, etc., slow growth, chronicity, edges slightly indurated, very scant discharge, slight but variable pain, and, there being no history of syphilis or its accompanying signs, was in favor of a diagnosis of cancer. Against that diagnosis were the facts that the edges were not sufficiently indurated, the color was too dark red, and it was rather too deep to be altogether certain that it was a roden ulcer.



Gumma of Face.

The patient was again closely questioned for a history of initial sore or other skin eruption. He was positive that he had never had an eruption of any kind, except a fever blister on his upper lip fourteen months before. On further questioning, he said that the fever blister had remained *in situ* for two months, during which time four physicians had seen it, diagnosing it as herpes simplex. On examination, the scar of this so-called herpes was discernible. The blood was then examined by the complement-fixation test. The report was returned positive. There still remained some doubt as to whether the positive complement-fixation test definitely indicated that the lesion was syphilitic. It was, therefore, decided to try the therapeutic test. Patient then received six injections of Arsenobenzol 0.5 gram between October 25th and November 19th. The blood reaction following the last injection was doubtful, but the lesion had entirely disappeared, leaving only a soft scar.

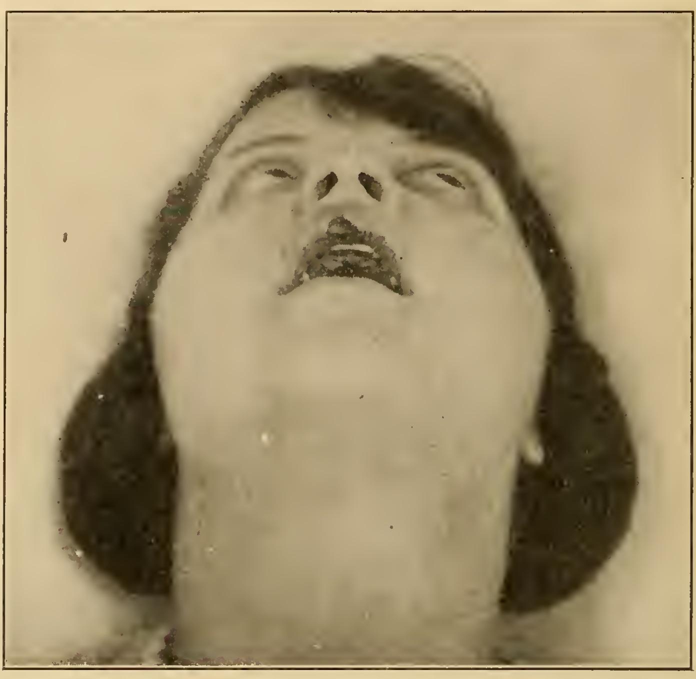
A differential diagnosis of Gumma and Epithelioma:

	Epithelioma (Basal Cell).		**Gumma.**
1.	Occurs usually after 40 years.	1.	Occurs before 40 years of age.
2.	No history of syphilis nor accompanying symptoms or signs.	2.	Very often history of syphilis.
3.	Usually on face and head.	3.	Usually on lower extremities.
4.	Pain slight, if any.	4.	Painless.
5.	Discharge, small amount, often bloody.	5.	Discharge profuse and purulent.
6.	Bleeds easily.	6.	Does not bleed easily.
7.	Edges of basal cell type are hard and indurated.	7.	Edges not indurated.
8.	Very slow growth.	8.	Moderately rapid growth.

2. Case of Chancre simulating Epithelioma.

This case is interesting principally because the lesion was very similar to another of a different diagnosis on a patient who came to the clinic a short time previously. These cases were not as difficult of diagnosis as the first case cited, the age of the patients and duration of the lesions figuring largely in the diagnosis.

A. S.; single; white; female; aged 20; store clerk. Denies genital exposure and previous eruption of any kind. Is engaged to be married and had been kissing very much.



Chancre of Lip.

History of Eruption—Five weeks before coming to the clinic a small lump appeared on her upper lip. In a few days this lump became moist and ulcerated. Patient says the lesion has retained its original size. Some home remedies were tried without result, and patient was then brought to the clinic by her fiance, who is receiving treatment for cerebro-spinal syphilis. Her fiance had no eruption at the time, but the laboratory findings in his case were as follows:

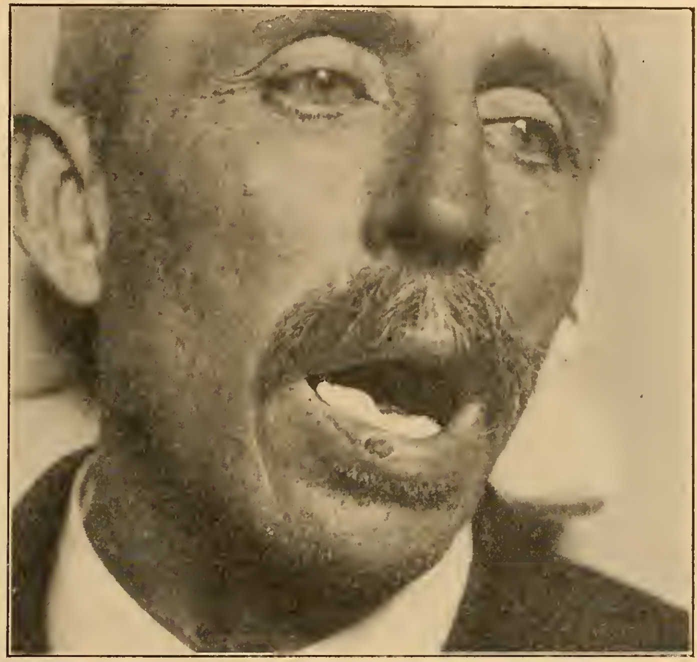
Blood (Wassermann)—Positive.
Cerebro-Spinal Fluid (Wassermann)—Positive.
Gold Chloride—Positive paretic curve.
Globulin—Positive.

Description of Lesion—On the upper lip, slightly to the left of the mid line, there is a round ulcer about five-eighths of an inch in diameter. Edges are raised and slightly infiltrated, showing a well defined margin (Fig. 2). Infiltration and exudation slight in amount. No apparent palpable glands; little crusting; no pain.

3. Case of Epithelioma (Basal Cell Type).

B. R.; aged 54; married; white, male, mechanic. Denies venereal disease and any eruption, except present lesion.

History of Eruption—Two years ago on the lower lip there appeared a small pimple, which gradually ulcerated and grew in size during the first eighteen months. For the last six months there has been no appreciable growth.



Epithelioma of Lip.

Description of Lesion—On the lower lip, somewhat to the right of the mid line, there is a well defined, round, superficial ulcer, about one-half inch in diameter; no exudation. Crust thin, brownish, and slightly tenacious. Edge is thin, indurated, and glistening in appearance. Practically no infiltration; no pain.

In these latter two cases, the diagnosis of chancre in Case 2 and of epithelioma in Case 3 was partially decided by the duration of the lesions, the former being acute and the latter chronic; and finally by a dark field illumination examination in Case 2 and a biopsy in Case 3. Spirochætes were found in the dark field and epitheliomatous pearls in the biopsy.

From this illustration of the value of these examinations, it is urged that greater resort be had to routine complement-fixation (Wassermann) test and biopsies.

OPEN THORAX.

By Nathan Winslow, M.D.

Owing to the fear of collapse of the lung, with death from asphyxia, intrathoracic surgery had made but slight progress until the Great War demonstrated that surprisingly large openings in the chest wall are not necessarily fatal. The observations of Duval and Piery had much to do with the changing of the prevalent notion that compression of the lung was fatal and had to be guarded against by cumbersome apparatus if the interior of the chest was to be attacked successfully. These men have demonstrated the lung to be open to operative attack with the hope of a reasonable meed of success without recourse to any special safeguards to combat pneumothorax. E. A. Graham, Annals of Surg., 1921, LXXII, 170, advances the view that on open pneumothorax on one side produces practically an equal amount of compression of both lungs instead of entire collapse of one lung with the maintenance of respiration by the other. If this were not true, he states, the establishment of atmospheric pressure within a pleural space would never prove fatal regardless of the size of the wound, as the other lung would be capable of maintaining life. Similarly, he says, a bilateral open chest should always be promptly fatal. Both experimental and war experience controvert the old conceptions. Experimentally, it is easy to demonstrate that a definite quantitative relationship exists between the size of the opening in a penetrating chest injury in any individual and the danger of death. The important factor is the amount of air which enters the chest from the outside with each inspiration. Theoretically, the approximate size of the maximum opening compatible with life if the mediastinum has a normal mobility can be accurately ascertained, but practically the opening must be somewhat smaller, since the extra work performed by the muscles of respiration to establish compensation increases the amount of air required, and the presence of toxemia, infection and other factors increasing the level of metabolism will decrease the safety limits of the maximum size of the opening. In a person of 3700 c. c. vital capacity, Graham advances 8 sq. in. as the largest opening for which compensation can be made if the mediastinum has a normal mobility. He states it makes but little difference if the pneumothorax be uni or bilateral, provided the combined areas of the openings be not in excess of the 8 sq. in.

In this connection I desire to report a case of multiple stab wounds penetrating the thoracic wall. One of the wounds was sufficiently large to afford an unhampered view of the lung expanding and contracting with each expiration and inspiration. The lung was compressed to less than half of its normal size and crowded against the posterior wall of the thorax. The lower margin during expiration barely reached the 4th rib on a level with the anterior axillary line.

C. W., a colored man, married, aged 35 years, was stabbed in the chest with a large penknife by his brother-in-law in a quarrel about 6 P. M., May 6, 1920. There were two wounds in the lower part of the left side of the chest, the upper and larger some four inches long between the 7th and 8th ribs and centering on the anterior axillary line, the lower between the 10th and 11th, an inch in length. Beneath the skin of the latter was a large hematoma which caused a bulging of the integument. The respiration was embarrassed, the pulse accelerated and the expression anxious. He complained of severe pain in the chest on the injured side. Palpation, percussion and auscultation showed the lung to be partially collapsed. Operation was advised and accepted.

Operation (5/6/20)—Ether Anesthesia—Iodine Technic—Exploration and Suture—Cured.

In retracting the upper wound, the pleura was found to be open for three inches of its extent and the left lung collapsed to about one-half of its volume. The wound tract was iodinized and a debridement done and the wound closed tight. The lower wound was enlarged, and when traced to the bottom was likewise found to enter the pleural cavity. It was handled in the same manner as the upper lesion, after having removed the clotted blood. A small amount of free blood was detected in the pleural cavity. The diaphragm was not injured. The patient was returned to bed in good condition. His temperature never went above 100, pulse 100, and respiration 30. By 5/13/20 all were normal and the man was discharged cured 5/16/20.

Although the closure of a gaping wound in the chest wall is desirable in order to overcome embarrassed respiration, do not regard it as the essential object. Such an operation is in reality an incomplete one. Extraneous matter must be removed, lacerations appropriately handled, hemorrhage checked, and sepsis combatted before the external trauma is sealed. Recent experience has shown that compression is a beneficent rather than a malign influence in that it serves a useful purpose in checking hemorrhage and by permitting when occasion demands eventration of the lung, lobe by lobe, palpation, incision, resection and replacement of the lung in the thorax—acts impossible of accomplishment if the lung be expanded. Intrathoracic surgery has come into its own, and either an accidental or artificial open thorax is not the serious affair it was once supposed to be. Lacerations of, hemorrhage from, foreign bodies in, tumors and abscesses of the lungs are attacked now by surgeons boldly and with almost as little concern as the same conditions within the peritoneal cavity. For this we have to thank the experience gained in the war.

*REFERRED PAIN OF SOME ABDOMINAL CONDITIONS.

By Leon Freedom, M.D.

There are certain subjective symptoms which are of exceedingly great, although varying, importance in diagnosis, especially pain, and, even though pain may not be diagnostic, it may furnish an important clue as to the nature of the disease. On the other hand, in many common diseases, there may be an absolute lack of any pain or tenderness, so that a most important symptom is missing. Since pain is purely subjective, its intensity can only be estimated by the assertions of the sufferer and the differences in susceptibility of races, as well as individuals, must be taken into consideration, *i. e.,* Semitic being so hypersensitive as compared to Teutons and Slavs, neurotics, etc.

The manner of life greatly modifies the susceptibility. One used to hardships has great endurance. Christian Scientists refuse to admit, etc. Expectant apprehension increases it and often is its origin. Some understate the pain they suffer from pride, while others magnify without any thought of deceiving the physician. This is most likely due to the subconscious egotism of their illness and desire to get better by impressing the physician with the severity of their condition.

There are several things, however, which, if carefully investigated, will prevent deception, and that is—in the presence of really severe pain, respiration is rapid, pupils are dilated, the skin is moist with perspiration, pulse is often tense. There is a feeling of faintness and often a quite large amount of limpid urine is passed within a short period. These all, however, are not so frequently present.

We know there are many varieties of pain, varying from a dull ache to a sudden sharp or acute pain, and we are aware of the diagnostic value of the character of pain—*i. e.,* the acute pain of acute pleurisy or joint involvement.

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*Read before the Randolph-Winslow Surgical Society, January 25, 1921.

What concerns us here is the diagnostic importance of the seat of pain.

Head explains referred pain in this way: When a powerful stimulus is applied to an organ which normally possesses a low degree of sensibility, the pain produced is felt in the part which is relatively more sensitive. Consequently, the tenderness of the skin in visceral disease is due to the passing of sensory impulses from a diseased organ to its corresponding spinal segment, these impulses causing a disturbance in the segment of such a nature that any additional impulses coming from the skin surface, with which this is connected, will be increased and modified so as to produce abnormal or painful impressions which are referred in consciousness to the part of higher sensitiveness, the skin. According to Bevan: referred pain is the name given to that class of pain in which the irritation occurs along the course of the nerve fibers, and the pain is felt as being produced in the somatic peripheral distribution of the affected nerve or nerves. These are three places where the irritation may cause referred pain:

1. *Cord.* When irritation is in cord, the pain sensation is referred along the pain paths of the same side of the body.
2. *Lesions of the post roots.* That is, girdle pains of locomotor ataxia, transverse cord tumors.
3. Lesions occurring somewhere on the nerve circuit. This makes up the largest class. If the lesion occurs on the trunk, pain is always referred to a point distal to the area at which it occurs; but if the irritation is on a branch, it may be referred to the periphery in an area proximal to that in which it occurred.

Reflected pain differs from referred pain. In the former, the stimulus is carried to the sensory ganglia or to the cord and then transferred from the sensory filaments of the neuron primarily affected to those of a secondary neuron. The stimulation is then carried in the neuronic pathway to the brain, and is perceived as coming from the distribution area of the 2nd neuron; the difference from referred pain being that, in referred pain there is a misreference of the pain by the sensorium, while in reflected pain there is a transference of painful stimuli from one neuronic system to another. These deflections have an anatomical basis (according to Lickley), for recent researches show that the nerve cells (in a segment) of the cord undergo degeneration as a result of any lesion in the corresponding segmental distribution area. This confirms the hypothesis that stimuli causing pain arise from direct irritation from pathological changes in the cord, and are not due simply to a transfer of stimuli from one set of cells to another.

The most numerous and important of reflected pains are those due to pathological changes in the intestinal viscera. Viscera themselves have no pain sensation, as elicited by ordinary pain-producing stimuli. They can be cut, torn, sutured, etc., without producing pain; they are insensible to heat and cold, yet they do have a sense of their own which tells of their well-being, especially when distended. When viscera are irritated the stimuli are carried to the cord and react on cord cells; the impulses are produced and sent out as motor impulses or are carried to the brain and perceived as painful. At the same time, the adjacent set of cells becomes irritable and react abnormally to all stimuli reaching them from the periphery. These are the so-called hyperalgesic zones of Head. These zones are not always present over the area of the involved viscera (as explained by McKenzie) that, in the course of development the tissues, which in a low form of life must immediately have covered the organ, become displaced. In this way, several peculiarities in pain production may be explained.

Why do we have pain in the testicle in ureteral colic? In early fœtal life, the testicle was very high in the abdomen and was supplied by the first lumbar segment. Then it journeyed through the abdominal ring to the scrotum, always retaining its same nerve supply. The ureter, likewise, receives its nerve supply from the same segment, so that when irritation occurs in the ureter, the pain is often referred to and is felt as arising in the testicle, which at the same time is tender. In renal colic, the skin of the scrotum being supplied by the sacral nerves, the deep coverings of the testicle are always hyperalgesic, because they are in relation with the same cord segment as the kidney (Bevan). In kidney involvement, the nerve supply coming from the tenth, eleventh and twelfth dorsal and first lumbar segments, all the tissues supplied by the following nerves arising in these segments by the ilio-hypogastric, also ilio inguinal, genito-crural, external, middle and internal cutaneous and obturator nerves may be involved, so we can see how widespread referred pain may be, even to the anus, rectum, labia majora and in some cases as far down as the ankle.

Dr. Howard Kelly says that 60 per cent. of cases having ill-defined, right-sided pain have disease of the kidney. In a study of 300 cases of abdominal pain in disease of the kidney and ureter by Cecil, the classical pain, beginning in the region of the superior lumbar triangle and radiating to the lower abdomen, genitalia and thigh, was present in only 21 cases, and in 20 per cent. of these cases the pain was so misleading as to cause operation for gall bladder and appendix; in 28 per cent. of the cases of stone, the pain was limited to the abdomen.

A condition frequently overlooked is hydro-nephrosis or hydro-ureter, as shown by Hunner, due either to stone formation or ureteral stricture, in which pain occurred in the right and left upper and lower abdomen and back, in either or both; and was so misleading as to be diagnosed ptomaine poisoning, acute gall bladder or appendix.

Dr. Braasch, of the Mayo Clinic, states that fully half of the patients with lesions in the right kidney and ureter have had operations on adjacent organs; while the kidney and ureter conditions were passed over unrecognized. He states that at the Mayo Clinic it is now the custom to refer every patient with abdominal pain, which has not been definitely identified by abdominal examination, for an X-ray examination of the urinary tract and then to the urologist. For every case in which (1) pus and blood is found in urine; (2) or history of either; (3) every doubtful abdominal tumor.

Dr. Fowler, of Washington, declares: "In any case of abdominal pain, when in doubt, suspect the kidney." Dr. Hyman, of New York, when in doubt, always cystoscopes and uses X-ray examination, especially in chronic cases.

Peritoneal. Pain produced by three things: (1) inflammation, (2) hemorrhage, (3) new growths. MacKenzie found that the peritoneum is not supplied by nerves, but the sub-peritoneal tissue is abundantly supplied; the same nerves going to the abdominal muscles; therefore the rigidity when peritoneum is affected.

Occasionally cases occur in which there is no pain; may be due to quantity of pus, or to the rapid destruction of nerve endings or impairment of their efficiency (Bradford); this frequently occurs in puerperal sepsis. In tuberculosis peritonitis, pain is frequently confused with referred pain from visceral involvement.

Stomach disorders are referred to the epigastrium and to the back between the posterior borders of both scapulæ and opposite the spinous process of the fifth dorsal vertebra. Pain often circles around from one of these areas to the other, and they are often tender to touch. Authorities disagree as to the exact area; but Head places the points of maximum tenderness opposite the ninth and tenth. As a matter of fact, it may be felt in any area from the fifth to the ninth dorsal vertebra, especially the maximal points of tenderness in this area.

In gastric pain it is necessary to inquire into (1) the character of pain, (2) time and manner of appearance, (3) relation to ingestion of food, (4) duration of pain, (5) previous attacks, etc. In gastric ulcer, pain is dull and boring, begins at the entrance of food into the stomach, usually in the epigastrium and slightly to the left, although it is claimed by many that the position of the ulcer on the stomach as well as the position of the stomach influences the site of pain. Some conditions frequently causing pain in the epigastrium and simulating gastric pain are: (1) gallstone colic, (2) cholecystitis, (3) pyloric and duodenal ulcer, according to Bevan, (4) acute pancreatitis, (5) angina pectoris, (6) acute appendix, (7) renal colic, (8) gastric carcinoma, (9) aortic aneurism, (10) uterine and ovarian disorders, (11) intercostal neuralgia, and other nervous diseases such as locomotor ataxia, etc.

Intestinal pains. Pain is usually imperfectly localized, but after much consideration over the matter, MacKenzie has come to the following conclusions: That (1) if the lesions are of small gut, the pain is reflected to the anterior abdominal wall in the interval between the navel and xyphoid. (2) If in large gut, the pain is felt slightly below the navel. (3) In lesions of the rectum and sigmoid, it is felt directly above the pubes. Nearly all painful intestinal lesions are circum-umbilical. In appendicitis this is very common, that as pathology progresses the site of pain is changed from the umbilical region to the right lower quadrant. In diseases of small gut, pain is generally felt above umbilicus; in large gut, below. A peculiar characteristic, and one which frequently holds true, is that in large gut diseases, pressure on the abdomen over the site of the colon (which, in its transverse division is above umbilicus, and in ascending and descending to either side of it) will produce pain in the mid-abdominal zone, without, in many cases, producing pain at the point of pressure. In lesions of small intestine the contrary holds true, for pressure below causes pain above the umbilicus.

If the pain that is felt closely resembles that of stomach, as is often the case in duodenal ulcers, and examination of stomach does not reveal any abnormality, suspect the duodenum. It is very common of the duodenum, because of proximity to stomach, to produce disturbances similar to gastric. In some cases, intestinal pain from disease is felt in the back in one or the other lumbar region. Pain in the back generally alternates with pain in the anterior abdominal wall. As a rule, both are not coincident. Visceral pain depends for its localization largely upon the fixity or mobility of the organ affected. The more fixed the part, the more constant the pain. In movable small gut, the localization is diffuse and centralizes chiefly about umbilicus. In fixed parts, the pain is usually felt where they are joined to the abdominal wall.

As to the special parts of the rectum, colon, appendix and anus: Colon—the pain in colon disease, especially impaction, seems to be most pronounced in right or left hypochondriac, according to its seat, and frequently referred along the anterior lateral or posterior aspects of thigh. Rectum—local conditions, such as ulcer, new growth, stricture, etc., since the rectum is highly insensitive to pain, the pain is frequently referred down the back part of the thigh, even to the penis, or labia in female. *Pain* may be referred to the rectum in diseases of the uterus, ovary, tubes, prostate, post-urethra and vesical trigone, associated with constant desire to go to stool. Nervous conditions frequently cause rectal referred pain, epilepsy, locomotor ataxia crises, neuralgia and hysteria.

Anus. Is extremely sensitive, and organic conditions are never difficult in diagnosis.

Appendix. Is connected to the tenth and eleventh spinal segments, which supplies also the recti abdominal muscles; therefore causing rigidity arising from the intra-abdominal changes of appendiceal involvement; principally at McBurney's point.

Pain may be referred to the abdominal wall of the same side, or to the tunica vaginalis testis and also to the sacro-iliac region. It may be transferred at a higher or lower level on the same or opposite side of the abdominal wall. Conditions frequently simulating appendicitis are: (1) colitis, (2) intussusception, (3) gall stone, (4) renal colic, (5) ovarian, (6) tubal disease, (7) hydronephrosis, (8) sciatica, (9) lumbago, (10) ectopic pregnancy, (11) strangulated hernia and peritonitis. Chermise describes a condition occurring in lues, flu and hysteria in which much pain occurs about McBurney's point.

Diseases of liver, gall bladder and ducts: may be affected by inflammation, obstruction from new growths or bodies, adhesions, displacement, etc. The nerve supply is chiefly sympathetic, but the fifth and sixth dorsal segments help the gall bladder and the eighth, ninth and tenth help the liver. The intercostals, as was frequently thought, do not supply the liver.

The vagus also assists in liver innervation; so many cases of common duct diseases, especially when the area near the junction of the hepatic and cystic duct is involved, the pain producing stimulus is carried through the branch from the adjacent sympathetic ganglion to the left vagus, and thence to the fourth and fifth dorsal segments, from whence it is reflected to the chest wall in the distribution area of these segments. This explains why pain is sometimes felt on the left anterior wall of the chest at about the level of the fourth and fifth costal cartilages; sometimes confused with pneumonia. Pain in the right shoulder also frequently occurs in liver disease. This is explained by the stimuli being referred through the right phrenic; the diaphragm being involved by a lymphangitis spreading from an inflamed liver or gall bladder.

The liver and gall bladder are insensible to pain—*i. e.*, pressure, heat and cold, as well as faradic stimulation. However, pulling on the common duct or tilting of liver will cause pain.

With the abdomen relaxed, place the hand flat on the anterior surface with finger tips deviated toward the liver, and palpation carried on in the usual way, etc. If during the acme of inspiration pain is felt, it indicates a peri-hepatitis or gall bladder disease. In peri-hepatitis the pain frequently radiates to the front of the right shoulder.

This may be differentiated from gall bladder disease by requesting patient to sit upright, remove fingers to region of gall bladder and request patient to take a deep inspiration. Should there occur a sudden stopping of inspiration, accompanied by a grunt, gall bladder disease is indicated.

Tenderness at Mayo Robson's point is supposed to indicate inflammation of the gall bladder or ducts; this tenderness lies along a line extending from the top of the ninth costal cartilage to the umbilicus. The point of greatest tenderness lies on this line, 1 inch to the right of the umbilicus.

Murphy differentiates gall bladder pain and tenderness from lesions of other organs.

Place patient in sitting position, bent well forward, hands resting on knees. The examiner now stands behind patient and places his hand, with the palm flat against the abdomen immediately below ribs on right side. Tell patient to take deep breaths. After each expiration the examiner's hand follows the abdominal wall until it approaches closely to the affected gall bladder and adjacent tissues, when suddenly the patient ceases breathing with a gasp and complains of severe pain. This indicates the hand has touched inflamed tissues.

In gall bladder disease the patient frequently complains of pain radiating to right nipple and backward to the shoulder blade and thence to the lumbar region. Schmidt claims that radiation of pain into the genitals with retention of urine may occur. Pain may radiate to the right iliac fossa and be confused with appendix, although oftentimes both are simultaneously involved.

Pain referred to a distance seldom occurs except in neurasthenics, in which they might complain of pain radiating to the back of the head and down the spine. The location, direction and radiation of pain helps distinguish gall bladder pains from that due to kidney, duodenum or stomach. If the gall bladder is inflamed, pressure over it will cause pain to appear in the right shoulder and in the epigastrium, to the right of the median line; remembering the classical most tender area is at the junction of the ninth and tenth costal cartilage and costal arch. Schmidt claims that in gall bladder disease there is a point of tenderness over the acromion. Pressure at this point causes pain which radiates to gall bladder; *vice versa,* pressure over gall bladder causes pain which radiates to this area. He said that this condition occurs in liver abscess and subphrenic inflammations and seem to be most pronounced when diaphragm is involved.

Gall duct pain is located in epigastrium; may be referred to anterior chest wall at about the fourth to sixth left costal cartilage. Pain from cystic duct disease may be referred to right of vertebral column, between the eighth and eleventh dorsal vertebræ, while hepatic duct pain may be referred to the right hypochondrium, to the thigh, and even to the head and neck. In some cases, it has been mistaken for angina pectoris; in other cases it may begin in the epigastrium and radiate over the abdomen to the right sub-scapular region and has been felt even in the right lumbar region; has been known to radiate to the left shoulder.

Pancreas. Closely related to the pancreas are the large sympathetic ganglia; pressure on these ganglia causes a disturbance which is reflected as pain through the medullated nerves supplying the body wall. Pressure on the superior mesenteric vessels and nerves causes pain referable to the small intestine; should inflammation extend to other organs, we get signs and symptoms of their involvement in addition to pancreatic lesions. The Pancreas is almost entirely surrounded by duodenum, on either side by kidney, the common bile duct passes through its substance. Consequently, any one part affected influences the others.

Schmidt says it is well to think of possibility of pancreatic lesions in all cases of apparent peritonitis or intestinal obstructions, as well as colicky abdominal pain following epigastric blows or trauma. If in these conditions no indication is found in the urine, but glycosuria appears spasmodically or constantly after attacks of pain, this should strongly suggest pancreas. Our opinion is much strengthened if stool examination shows insufficient digestion of albumin and fats and the physical examination justifies consideration of pancreatic disease. The pain in pancreatic disease, when present, is generally in the left epigastrium, and radiates to the left inguinal region, or to the back under the *left* scapula (different disease from gall bladder, which radiates under right scapula). Should the pain be present in the epigastrium and radiate around to both sides of the thorax, it generally indicates a calculus. If the cœliac plexus is involved, pain radiates to cardiac region and resembles angina pectoris. Because of the absence of peritoneum on the posterior surface of the pancreas and of the intimate relationship which it has to the post abdominal wall, pressure made to either side of the second or third lumbar vertebra is also provocative of considerable pain.

Acute pancreatitis, a condition only diagnosed after finding fat necrosis when a low abdominal incision has been made for suspected ulcer or low abdominal conditions, is frequently overlooked.

Fitz says, suspect acute pancreatitis in a previously healthy person, or one who has had previous attacks of indigestion, when suddenly seized with violent pain in epigastrium, followed by vomiting and collapse, and in twenty-four hours by a circumscribed epigastric swelling, tympanitic or constant, with slight rise in temperature.

In pancreatic disease, pain may radiate to the back, between the shoulder, to McBurney's point, to the legs and to the lumbar region.

Spleen. Involvement of the spleen frequently results in tenderness over the splenic area, but very few lesions cause acute pain, although when pain is absent there is a feeling of pulling or dragging in the left hypochondrium, or a sense of tension in the splenic area or dragging in the epigastrium. A very significant feature of splenitis is tenderness of the left pneumogastric, and in a series of 10 cases reported by Embleton, in 6 the left pneumogastric was tender in pressure and in 2 to the right.

Frequently pain of splenic involvement is found referred in the shoulder over the acromion process and at the junction of the middle and upper thirds of the upper edge of the trapezius muscle. The classical pain area is known as Signorelli's spleen point; near the intersection of the left fifth intercostal space and the mid clavicular line.

In conclusion, use the following method of localizing the viscus causing the reflected pain:

1. Determine if, in connection with it, there is an associated area of hyperalgesia.
2. Delimit the area of hyperalgesia as nearly as possible, and orient it with a cord segment.
3. Find out the organs supplied by this segment.
4. Examine the organ or organs for disease.
5. See if the pain can be reproduced by manipulation of the organ.

EDITORIAL

THE NEW PROFESSOR OF MEDICINE.

Expressions of satisfaction are being heard everywhere upon the appointment of Doctor Maurice C. Pincoffs as professor of medicine and director of the medical department in the University of Maryland. Doctor Pincoffs has been for a number of years with Doctor L. F. Barker as an assistant. He is a young man of excellent attainments and pleasing personality, who comes to us highly recommended. The appointment marks an epoch in the history of the University of Maryland in that the new professor is obligated to devote a certain number of hours of each day to teaching purposes. Dr. Pincoffs is a graduate of the Johns Hopkins University and a veteran of the Great War in which he served with great distinction, his work meriting the commendation of his superiors. He was also for some time a resident physician in the Municipal Hospital at Bay View. He is well trained, and we feel sure is a distinct acquisition to the teaching force of the University. "The Bulletin" bespeaks for him much success and its co-operation in making his administration both profitable and creditable. Doctor Pincoffs' appointment came as a result of Doctor Gordon Wilson refusing to serve as the head of the medical department any longer. "The Bulletin" is sorry that Dr. Wilson saw fit to relinquish the leadership of this department, and desires to express to him on behalf of its readers its sincere appreciation of his long, faithful, and capable service to the University of Maryland. It is glad to announce, however, that the institution will not entirely lose the signal attainments of Dr. Wilson in that he will remain a member of the teaching body and continue to deliver in his effective and inimitable way a course of lectures as of yore.

TO OUR OLDEST LIVING MEDICAL ALUMNUS, GREETINGS—DOCTOR CARY B. GAMBLE, CLASS OF 1846.

For a long time "The Bulletin" has been under the erroneous impression that the oldest living alumnus of the University of Maryland's Medical Department was Doctor John J. R. Krozer, class of 1848, who died February 22, 1921. At that time there was a graduate living who antedated Dr. Krozer's graduation by two years—Dr. Cary B. Gamble, Sr., class of 1846. Though 96 years old, it is stated that Dr. Gamble's mind is still unclouded.

He is the son of Col. Robt. Gamble, of Gamble's Hill, Richmond, Va., and Letitia Breckinridge, a descendant of Gen. James Breckenridge, candidate for the Presidency against Abraham Lincoln, and the father of Dr. Cary B. Gamble, Jr., class of 1887, a professor of medicine in the University of Maryland and ex-Major, M. C., U. S. A., in the Great War. Dr. Gamble, Sr., was born at Grove Hill, Botetourt County, Va., in 1825. When but one year old Dr. Gamble's father moved to Florida. At ten years of age he was sent to a school in Richmond, going thence to Washington and Lee College, then to the University of Virginia, where he was graduated with the class of 1845. He then entered the Medical Department of the University of Maryland, graduating with the degree of M. D. in 1846. Soon thereafter he returned to Florida, where he practiced his profession until the outbreak of the Civil War, when he joined up with the Confederacy and was assigned to the First Florida Volunteer Regiment as surgeon, with the rank of Major. At the battle of Shiloh he was captured by the Yankees, but was later exchanged and rejoined the Confederate Army, in which he served until the close of the struggle. After the war he came to Baltimore, where he practised medicine with much success and credit to himself and his Alma Mater until the early years of the present century. Since his retirement he has moved to Relay, Maryland, where he makes his home with a grandson, Edward B. Lowndes. "The Bulletin" extends to Doctor Gamble its most sincere wishes and congratulations on a life so ripe with experience and good deeds, and hopes that he will be spared for many years to come.

ITEMS

Amongst the Fellows of the American College of Surgeons are:

William H. Arthur, M.D., 2130 Le Roy Place, Washington, D. C., Colonel M. C., U. S. Army, retired; Howard Elmer Ashbury, Phar.G., M.D., 1903, 810 St. Paul Street, Baltimore, Md.; W. Wayne Babcock, M.D., P. & S. 1893, Professor of Surgery and Clinical Surgery, Temple University, 2033 Walnut Street, Philadelphia, Pa.; Charles Bagby, Jr., A.B., M.D., class of 1904, Associate in Experimental Neurology, Johns Hopkins University, the Latrobe Apartments, Baltimore, Md.; Julian Meredith Baker, B.Sc., M.D., class of 1879, 503 Main Street, Tarboro, N. C.; Edgar Garrison Ballenger, M.D., class of 1901, Associate Professor of Genito-Urinary Diseases, Emory University, 805 Healey Building, Atlanta, Ga.; Charles W. Banner, D.D.S., M.D., class of 1899, Banner Building, Greensboro, N. C.; Frank L. Barnes, M.D., P. & S., 1896, 1408 Rosalie Avenue, Houston, Texas; Robert Parke Bay, M.D., class of 1905, Professor of Oral Surgery, University of Maryland, 1800 N. Charles Street, Baltimore, Md.; John J. Bell, M.D., P. & S., 1901, 661 W. Eighth Street, Erie, Pa.; John McFarland Bergland, B.Sc., John Hopkins University, 1904, Associate in Obstetrics, University of Maryland, 4 W. Biddle Street, Baltimore, Md.; Daniel Albert Berndt, M.D., P. & S., 1896, 1304 Gallia Avenue, Portsmouth, Ohio; Edward J. Bernstein, M.D., class of 1887, 507 Fine Arts Building, Detroit, Mich; William N. Bisphan, class of 1897, Colonel M. C., U. S. Army, Washington, D. C.; Dougal Bissell, B.Sc., M.D., class of 1888, 219 W. Seventy-ninth Street, New York City; Hugh Ratchford Black, A.M., M.D., class of 1883, Spartanburg, S. C.; Edward Maurice Blackwell, M.D., class of 1890, Commander, M. C., U. S. Navy, Washington, D. C.; Charles French Blake, P. & S., 1893, Professor of Proctology, University of Maryland, 20 E. Preston Street, Baltimore, Md.; Herbert C. Blake, M.D., B.M.C., 1905, Associate Professor of Surgery, University of Maryland, 1014 W. Lafayette Avenue, Baltimore, Md.; Rupert Blue, M.D., D.Sc., D.P.H., class of 1892, United States Public Health Service, Washington, D. C., formerly Surgeon General, U. S. P. H. S.; James Bordley, Jr., M.D., class of 1896, 330 N. Charles Street, Baltimore, Md.; John B. Boucher, M.D., P. & S., 1894, 25 Charter Oak Avenue, Hartford, Conn.; William St. Clair Bowen, M.D., class of 1888, Clinical Professor of Obstetrics, George Washington University, The Farragut, Washington, D. C.; Charles Emil Brack, Phar.G., M.D., P. & S., 1895, Professor of Clinical Obstetrics, University of Maryland, 500 E. Twentieth Street, Baltimore, Md.; Hugh Brent, M.D., class of 1903, Associate Professor of Gynecology, University of Maryland, 16 E. Chase Street, Baltimore, Md.; Roger Brooke, M.D., B.M.C., 1900, Colonel, M. C., U. S. Army, Washington, D. C.; George Corbin Bryan, M.D., B.M.C., 1896, 217 Baker Building, Walla Walla, Washington; George McClellan Burroughs, M.D., B.M.C., 1900, 5 Broad Street, Danielson, Conn.; Arthur Parker Butt, M.D., P. & S., 1895, 205 Randolph Avenue, Elkins, W. Va.; Harry Francis Byrnes, M.D., B.M.C., 1904, 4 Chestnut Street, Springfield, Mass.

It will be pleasing to his friends wherever located to know that Doctor Henry L. P. Naylor, a veteran in point of service to humanity, is still actively engaged in the practice of his profession. Doctor Naylor is a graduate of the class of 1860. It is given to but few doctors to serve man over a period of sixty-one years. Such is Doctor Naylor's record. And be it to his everlasting glory he has always kept abreast of the times. He has seen medicine pass through many fads and fancies and from one basic discovery to another. Those which proved their usefulness he adopted. We are glad to state that today his mind is as active as ever and that he is still as of yore practicing his profession with credit both to himself and his alma mater.

Doctor Kenneth B. Jones, class of 1911, has assumed charge of the University Hospital, as superintendent, vice Dr. Harry M. Stein, class of 1914, superintendent during the last three years, resigned to enter private practice in Baltimore. Dr. Stein will limit his practice to internal medicine. He is well prepared, and was a capable, conscientious and most acceptable superintendent. The best wishes of "The Bulletin" go with him in his new undertaking.

Doctor Robert L. Felts, class of 1898, is located at Durham, N. C. He is at present attending the medical and pediatric clinics at the University Hospital.

Doctor Milton R. Walter is located at 167 West Seventy-first Street, New York City.

Doctor Howard J. Maldeis, class of 1903, has resigned as visiting pathologist to the University Hospital. He has opened a laboratory of clinical pathology at 605 Park Avenue, Baltimore, Md. He is prepared to do all sorts of blood work, urine and gastric analyses and tissue examination.

Doctor A. L. Fehsenfeld, class of 1909, and Mrs. Fehsenfeld, of Baltimore, are receiving the congratulations of their friends on the birth of a baby boy.

Doctor N. de Cadorna, class of 1920, is serving as a medical interne at the Maryland General Hospital.

Doctor John William Metcalf, class of 1920, is a surgical resident in the Maryland General Hospital.

Doctor George LeRoy Wissig, class of 1920, is a gynecological resident in the Maryland General Hospital.

Doctor Lynn H. Brumback, class of 1920, is a gynecological resident in the University Hospital.

Doctor John G. M. Reese, class of 1920, is the resident obstetrician in the University Hospital.

Doctor Jack Hundley, late resident gynecologist in the University Hospital, has opened offices at 1009 Cathedral Street, Baltimore. He limits his practice to gynecology and abdominal surgery.

Doctor Zeb. Hooper, late surgical resident in the University Hospital, has returned to his home in North Carolina.

Doctor W. F. Sappington, class of 1901, has been commissioned a Major in the M. C., of the United States Army.

Doctor John C. Woodland, class of 1915, Captain M. C., U. S. A., is stationed at Camp Meade.

Doctor Everett Le Compte Cook, class of 1914, Captain, M. C., U. S. A., is stationed in Panama. He was a recent visitor to the University Hospital when on leave of absence.

Doctor Henry A. Naylor, class of 1900, is president of the Baltimore County Medical Society.

Doctors J. C. Brogden and C. C. Hoke have opened offices at 736-37 Mayo Building, Tulsa, Okla.

Doctor FitzRandolph Winslow, class of 1906, has removed from Baraboo, Wis., to Hayden, Arizona, where he is engaged in the practice of surgery.

Doctor William J. Coleman, class of 1908, late Lieut-Colonel, U. S. Army, and formerly medical superintendent at the University Hospital, has been re-elected medical superintendent of the Maryland General Hospital.

Doctor George Perry Ross, class of 1915, late Captain, U. S. Army, has located at Skaneateles, New York, where he is engaged in the practice of his profession.

Doctor Arthur M. Shipley, class of 1902, late Lieut.-Colonel, M. C., U. S. Army, has been cited by Surgeon General Ireland, M. C., U. S. A., and recommended for the Distinguished Service Medal for service rendered in France as director of the surgical department in Evacuation Hospital No. 8. It is both satisfying and gratifying to his many friends to hear that Dr. Shipley's service has been deemed worthy of this recognition. It is said that Dr. Shipley's teams were the best organized of any of the surgical teams in the American Expeditionary Force.

Doctor W. S. Rankin, class of 1901, Secretary of the North Carolina State Board of Health, was the speaker at the De Lamar course lecture at Johns Hopkins School of Hygiene and Public Health, April 11, 1921. His subject was "Certain Important Principles of State Health Administration." Doctor Rankin has attained an enviable position amongst the health officials of the country. He is a young man of extraordinary ability and reflects credit upon his Alma Mater.

It will be gratifying to his friends to hear that Doctor F. W. Rankin, class of 1909, is considered one of the most skilled assistants that has served at the Mayo Clinic.

The General Alumni Association of the University of Maryland held its annual banquet May 28, 1921, at the Hotel Southern, Baltimore. This in all probability will be the last public function of this organization, as it is proposed to fuse all of the alumni associations of the University into one body, to be known as the Alumni Association of the University of Maryland. This is as it should be. There has always been too much division of interests at the University, and the reorganization of the various alumni associations into one component body is a step in the right direction. A school is what its alumni make it, no more, no less. A strong, active alumni association means a strong University of Maryland; a weak, inactive alumni association or series of alumni associations means a weak, struggling University of Maryland. Realizing that the several departments have interests peculiar to the special school, the plan of reorganization will in all probability take the form of a series of chapters for the several departments, with a strong central body directing the whole. At any rate, the officers elected at this meeting are to hold office only until some sort of an arrangement is consummated when the General Alumni Association will cease to exist. It has done a good work in that it has shown the necessity of one association for all of the schools. Its work is accomplished. It must give way for changed times and changed conditions.

Doctor William Royal Stokes, Professor of Bacteriology in the University of Maryland and, since 1896, City and State Bacteriologist, is recovering from a nervous breakdown. Here's hoping that he will soon be well.

Doctor L. A. Riser, class of 1908, is assistant to the State Health Officer, South Carolina, and is located in Columbia, S. C. He writes that Doctor Roy Finney, class of 1920, made the highest grade of any of the participants before the State Board of Medical Examiners of South Carolina at the Fall 1920 examination, and Doctor Paul E. Knotts, class of 1920, was second. He also states that Doctor Finney's grade is the highest ever made before the State Board of South Carolina. "The Bulletin" desires to extend its sincerest congratulations to these two men who so nobly have upheld the prestige of their Alma Mater.

The graduates of the 1921 class, University Hospital Training School for Nurses, are:

Mary Belle McDaniel	Maryland	Julia Rebecca Smith	Maryland.
Zadieth Violet Reese	Maryland.	Susan Pauline Neady	Penna.
Anna Elizabeth Woods	Maryland.	Christine Minnis	Penna.
Louise Lee Batemen	Maryland.	Ruby Lee Reister	No. Car.
Mary Cutter Fisher	Maryland.	Claribel Hampton	No. Car.
Norma Lavada Gaver	Maryland.	Jessie Geraldine Rhodes	No. Car.
Ruth Elizabeth Gorman	Maryland.	Kate Womack Hogshead	No. Car.
Helen Margaret Childs	Maryland.	Helen Eugenie Reamy	Virginia.
Isabelle Jean Hanna	Maryland.	Blanche Lee Martin	No. Car.

Doctor A. L. Wilkinson, class of 1903, is Secretary of the Baltimore County Medical Society.

Doctor H. O. Reik, class of 1891, is director of the Department of Ophthalmology and Oto-Laryngology in The American Institute of Medicine, New York.

The following is the report of the Woman's Auxiliary Board for the the past year:

> Swiftly as a feather falling from an eagle's flight has sped away the last twelvemonth, and today the Woman's Auxiliary Board stands facing a New Year, for which the mysteries of Fate and Time hold in their silent laps the destinies of the members. Happiness we desire in abundant measure, but that is not all. What we should more earnestly crave is the life of the soul; for, as has been said by a great writer, "It is not at all a question of the quantity of what we do, but of the quality," and if our hearts are full of the light of God, it shall be ever well with us.
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> Behind the Woman's Auxiliary Board lies a year of superb endeavor, of extended usefulness, of new fields conquered and occupied.
>
> Our membership has been increased to 160; our views, our visions, have been enlarged; our hearts opened still more widely to the cry of the helpless and the poor.
>
> May I not recite, then, some of the things that have been done?
>
> New lights have been installed all through the Free Wards at a cost of $175.00. The Children's Clinic, where thousands of babies are saved, is headed in the Woman's Department by two of our members, to whom the physicians in charge give every praise for efficiency. In the larger general clinic, where thousands are helped back to life, one member heads the women workers and many others work under her. Two rummage sales, realizing over $550.00, under the leadership of another member; still another, whose health prevents her taking an active part in the work of the Board, has given $10,000.00, the interest from which is to be used in work throughout the Hospital; while still another member has interested a great woman's organization,

The Daughters of the American Revolution, in establishing a bed in the Maternity Ward at a cost of $1,000.00. Many card parties and evening affairs have been given by various members, which have swelled the coffers of the treasury and have been expended in deeds of mercy. A beautiful custom instituted the past year, and which I hope will always be continued, is the presentation to an honor nurse of the graduating class of a class pin as a recognition of her excellence, and I would recommend that the Board draw ever closer to the nurses, and help them in every way in their beautiful work. Twice a year $60.00 is donated to aid in keeping up the linen in the Free Wards. The Monthly Committee all through the year have scattered comforts, dainties, books and magazines among the convalescent patients, and at the Xmas Tide decorated the Hospital, filled trees with gifts and given an entertainment and banquet to all.

Indeed, it is not too much to say that no call for help, no request for assistance, has been disregared. Even $100.00 has been put aside to purchase the Rockefeller serum to be used in desperate cases of pneumonia.

And then in the Autumn, as a culmination, came the drive for funds for the Nurses' Home, and so hearty and generous was the response of the Woman's Auxiliary Board that often in the weekly reports their committees exceeded in amounts brought in those of their male associates.

In addition to the beautiful new Nurses' Home which the Board expects to do much in furnishing, we are hoping for a Child's Hospital built from the church across the way, and I beg that each and every member of the Board will feel a keen responsibility, and will throw herself into the work for these two magnificent additions with all the capability and enthusiasm that lead to success.

And now to you, dear members of the Woman's Auxiliary Board, I extend my thanks and express my gratitude for the unvarying courtesy, unfailing co-operation and charming friendship which you have ever shown me since I have been your President. The two years have passed all too swiftly and have indeed been those of pleasure and satisfaction, and I am proud to hand over to my successor a Board larger in numbers, more extended in usefulness, more eager in good works, than has ever before been the lot of the Woman's Auxiliary Board of the University Hospital of Maryland.

Florence MacIntyre Tyson

Mrs. Frederic Tyson, 251 Preston St., West,

January 7th, 1921

At the Annual Commencement, held at the Lyric on June 1, 1921, the following men were granted the degree of M. D.:

John Forsyth Aubrey...Maryland.
Francis Lucian Badagliacca..N. J.
Bruce Barnes. . ...N. J.
Carl Fisher Benson.....Maryland.
John Ralph Bernardo...Delaware.
Vincent Bonfiglio. . ...Maryland.
Jogesh Chandra Bose, B.S.....Md.
Earl Edgar Broadrup...Maryland.
Andres G. Castro......Costa Rica.
Oscar G. Costa.........Porto Rico.
Samuel Hearn Culver...Delaware.
Herman Jacob Dorf.....New York.
C. F. Fisher........West Virginia.
Daniel Sebastian Fisher.Maryland.
Charles J. Foley........Maryland.
Joseph P. Franklin, B.A., Alabama.
Leon Freedom. ....Maryland.
Willetts Walton Gardner,,A.B..N. Y.
Kyle Wood Golley.......Maryland.
J. Stanley Grabill.......Maryland.
John Willis Guyton.....Maryland.
Cyrus Eugene Hawks.....Virginia.
Legan Henry Hobgood.......Mass.
Albert Salomon Hoheb, Porto Rico.
Julius I. Holofcener.....Maryland.
Albert Jaffe. . ...Maryland.
Baxter S. John...........Virginia.
Vincent Vernon Joska...Maryland.
Geo. Richardson Joyner..Virginia.
Daniel Francis Keegan, B.A., Conn.
Richard Joseph Kemp...Maryland.
Louis Lass. . . ..New York.
Benjamin Luban. . ...New York.
Arley Von McCoy, A.B....West Va.
Ezequiel Martinez. . . ...Porto Rico.
Stanley Wm. Matthews..North Car.
Thos. Rutter O'Rourk.....Maryland.
Frank Anthony Pacienzo..Maryland.
Moses Paulson. . ...Maryland.
Edgar Allan Poe Peters, B.S.....Ky.
Harold C. Pillsbury.........Maryland.
Ralph Johnson Plyler, A.B...No. Car.
Joseph Pokorny. . ...Maryland.
Norberto A. Quinones....Porto Rico.
Francis A. Reynolds..Massachusetts.
Ferdinand A. Reis........Maryland.
Harold A. Romilly..........Virginia.
James Barry Ryon, A.B....Maryland.
Fred. C. Sabin............New York.
Phillip J. Savage.......Connecticut.
Jesmond Wm. Schilling.......Penna.
Thomas Walter Seay.......Virginia.
Solomon Sherman. ....Maryland.
Elliott Walter Shircliff....Maryland.
Felix S. Shubert.......Pennsylvania.
John Augustus Skvarla, New Jersey.
Jacob Long Sowers, B.S...North Car.
S. Gordon Stone...............Ohio.
John Valentine Szczerbicki......Md.
Stanley J. Tilghman......Maryland.
Louis Michael Timko, Pennsylvania.
Herman Ernest Wangler, New York.
Edwin E. Ward...........Maryland.
Wm. Ferdinand Weinkauf, Michigan.
George Edward Wells.....Maryland.
Paul Foreman Wiest..West Virginia.
James Herbert Wilkerson, Maryland.
Mortimer H. Williams......Virginia.
W. Wellford Wilson, Phar.D.....Md.
James Clinton Wolfe....New Jersey.
Leslie Arno Yeager, B.S., Maryland.

MARRIAGES

Doctor Walter D. Wise, Clinical Professor of Surgery in the University of Maryland, was married July 27, 1921, to Mrs. Hugh McMillan, of Colorado Springs, Colorado.

DEATHS

Doctor James Foster Means, Claremore, Okla., B. M. C., class of 1892, Captan, M. C., U. S. A., died July 9, 1921, of aortitis, aged 55 years.

Doctor Howard M. Kemp, of Bloomington, Maryland, class of 1881, died suddenly March 14, 1921, of heart trouble while on a professional visit to a patient. Doctor Kemp was born at Bloomington 62 years ago, and practiced there 35 years. He served several terms in the Maryland House of Delegates as a member from Garrett County.

Doctor Louis C. Carrico, of Bryantown, Maryland, class of 1885, died suddenly March 13, 1921, of heart disease. He was one of Charles County's most prominent physicians, and for years had been recognized as one of the Democratic leaders of that county. He was 60 years old. He was born in Charles County, and was educated at Charlotte Hall Academy and Rock Hall College. He was graduated in medicine from the University of Maryland and began the practice of medicine in 1885. Previous to that he had been a school teacher. He was School Commissioner for Charles County from 1888 to 1892. In 1891 he was elected a member of the House of Delegates of the Maryland Legislature, and in 1893 to the State Senate. Doctor C. P. Carrico, of Cecil County, is a brother.

Doctor J. Horace Jenkins, class of 1901, of Elkton, Maryland, died August 22, 1921, aged 44. He had been ill a week and was removed to a hospital in Wilminigton, where he died. He was a native of Georgia. After graduating he returned to his native State, later to remove to Elkton.

Doctor John S. Green, class of 1882, one of the leading physicians of Baltimore County, died suddenly August 2, 1921, of heart disease. Doctor Green was 64 years old. Doctor Maurice Green, of Hamilton, and Doctor John S. Green, Jr., are sons. Since graduating in 1882, Doctor Green has practiced his profession at Glenarm. He was wide and favorably known, a conscientious practitioner, a true and loyal friend to the University of Maryland.

Doctor John G. Jay, class of 1871, of Baltimore, died April 1, 1921, of heart disease, aged 72. Doctor Jay was born in Harford

County. After graduating from Delaware College, he studied medicine at the University of Maryland, graduating with the class of 1871. He then became associated with the late Doctor Christopher Johnston. For many years he was professor of anatomy and surgery at the Woman's Medical College, Baltimore. Later he became associae professor of surgery and then clinical professor of surgery and finally emeritus clinical professor of surgery in the University of Maryland. Doctor Jay is said to have performed the first successful Cæsarian section in Maryland. During the Spanish-American War, Dr. Jay was chief surgeon to the Fifth Maryland Regiment, Infantry, United States Volunteers.

Doctor George Glanville Rusk, class of 1867, of Baltimore, died April 14, 1921, of pneumonia, aged 74. Dr. Rusk practiced medicine for many years in the eastern section of the city, where he was widely and favorably known.

Doctor Reuben Saunders Toombs, of Memphis, Tenn., Washington University, class of 1866, a former secretary of the Mississippi State Medical Association and one of the founders of the University of Tennessee, and professor of materia medica, clinical medicine and medical ethics in the University of Tennessee until 1918, as well as a Confederate veteran, died July 15, 1921, at Lexington, Ky., aged 77.

Doctor Logan Lindsay Banner, Castlewood, Va., P. & S., class of 1884, died June 29, 1921, from general paresis, aged 63. From 1897 to 1905 he served as a member of the United States Board of Medical Examiners for Pensioners.

Doctor J. E. Foscue, class of 1901, of Jamestown, N. C., died suddenly November 9, 1920, while on a professional call.

Doctor Leo Karlinsky, class of 1906, of Baltimore, died June 13, 1921, after an illness of five days. He was 36 years of age and a resident of Baltimore all of his life.

Doctor Joseph S. Raborg, class of 1867, of 1202 Mt. Royal Avenue, Baltimore, died June 12, 1921.

Doctor Charles R. Foutche, of Berkeley Springs, W. Va., P. & S., class of 1885, died April 12, 1921, of a complication of diseases, aged 59. After graduating he first located at Parsons, W. Va., but ten years ago moved to Berkeley Springs.

Doctor Edward P. McDevitt, class of 1875, of 2432 North Charles Street, Baltimore, died March 8, 1921, of heart disease, aged 66.

BOOK REVIEW

The Anatomy of the Nervous System, from the Standpoint of Development and Function. By Stephen W. Ranson, M.D., Ph.D., Professor of Anatomy in Northwestern University Medical School, Chicago. Philadelphia and London: W. B. Saunders Company, 1920; cloth; $6.50 net. During the last twenty-five years much work has been done in clearing up obscure points in the anatomy of the nervous system. These investigations have added not only to our knowledge of the structure of this system, but also of its physiological and pathological manifestations. The above mentioned book was projected with the idea of creating greater interest as well as pleasure in the study of nerve anatomy by interspersing amongst the pages its relationship to physiological and pathological processes. Everywhere the book teems with illustrations between the normal and abnormal anatomy and the related problems of physiology and pathology. By stressing this feature and emphasizing the practical applications to which a thorough knowledge of the anatomy can be applied in the solving of neurological problems more interest should be aroused in the study of an otherwise dull subject. Dr. Ranson is surely to be congratulated upon presenting a purely laboratory and basic subject in such an attractive garb. The tone of the book is conservative, the language is simple, direct, the style is excellent, the illustrations are appropriate and well executed—all points which should commend it to the good graces of the student and general practitioner desirous of gaining a working knowledge of neurologial anatomy. The author is imbued with the right pedagogical spirit when he says for physiological and chemical neurology a knowledge of conduction pathways and functional localization is essential, and this information can best be acquired in connection with the course in anatomic neurology.

A Text-Book on Pathology. By W. G. MacCallum, Professor of Pathology and Bacteriology in the Johns Hopkins University, Baltimore. Second Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company, 1920. Since the first appearance of this book important advances have been made in certain fields of pathology. In order to make this material available, MacCallum has incorporated these discoveries in a second edition which is just off the press. The war afforded unexcelled opportunities to study pathologically certain types of disease, for instance, influenza and its complicating pneumonia and empyema. Measles also offered a fertile field for these industrious investigators, likewise cerebro-spinal meningitis, war wounds, the effects of poison gas, those maladies that follow in the wake of cold, hunger, starvation. The latest information on these diseases and a mass of other material equally as important to a proper appreciation of the subject has been incorporated in the above book.

MacCallum has followed the same plan in presenting the subject as in the earlier edition. He holds the view that all disease is due to some injury. Tumors, he admits, offer a stumbling block to this plan inasmuch as their causes are still undetermined. After a few chapters devoted to the general principles of pathology, the writen then takes up the various types of injury and their immediate and remote effects and finally tumors. With Chapter nine begins the story of the defense of the body against injury, with a complete description of inflammation and its manifestations, fever, immunity, the acid-base equilibrium of the body, new growth and tissue repair, healing of wounds, illustrative examples of inflammatory processes, destructive and reparative processes, physical, chemical, etc. The author has presented the subject in a most attractive and instructive way. It is a model of concise and clear thinking. It is amongst the best of the modern pathologies.

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, M.D., late Lieut-Colonel, M. C., U. S. A., attending surgeon to the City Hospital and to St. Bartholomew's Hospital, New York City; consulting surgeon to the Nassau Hospital, Mineola, L. I. Third Edition; Entirely Reset; Octavo of 894 pages, with 892 Illustrations, mostly original. Philadelphia and London: 1921; Cloth; $8.00 net. Morrow's "Diagnostic and Therapeutic Technic" needs no introduction. The preceding volumes have firmly established it as a very useful and handy book to have around. Peculiar as it may seem, teachers and text-books assume in the so-called minor surgical procedures an unusual precociousness on the part of students. They go into the major surgical operations to the minutest detail, but pass by those things a young practitioner will most urgently need with a few words. A thorough knowledge of acupuncture, venesection, scarification, cupping, leeching, vaccination, the administration of diphtheria antitoxin, are as essential to the successful practice of medicine as the knowledge of how to perform an appendectomy or a herniotomy. It is this phase of medicine that this book deals with. It takes as its scope such subjects as laryngoscopy, cystoscopy, rhinoscopy, aspirations, exploratory punctures, infusion of normal salt, the treatment of neuralgia by injections, transfusion of blood, passing of sounds, of the stomach tube, lavage of the bowel, enemata, pessary therapeutics, etc.—in fact, practically all of the methods of instrumental procedures necessary to make a complete examination of the body organs. It contains a complete description of the Carrel-Dakin technic, including the preparation of the solution, the arrangement of the tubes, and the bacterial examination of the wound, the effects of, indications, methods of inducing and complications of artificial pneumothorax, Bier's hypermic treatment, and the diagnosis and treatment of fistulous tracts by means of bismuth paste. It is a most unusual book that will be found most helpful in unexpected emergencies. It is well written, concise and exceptionally well illustrated. It gives us great pleasure to heartily commend it to our readers.

Essays on Surgical Subjects. By Sir Berkeley Moynihan, K.C.M.G., C.B., Leeds, England. Illustrated. Philadelphia and London: W. B. Saunders Company, 1921. This book contains a number of essays which have been published from time to time by Sir Berkeley Moynihan. It contains the "Murphy Memorial Oration," "The Ritual of a Surgical Operation," "The Diagnosis and Treatment of Chronic Gastric Ulcer," "Disappointments after Gastro-Enterostomy," "Intestinal Stasis," "Acute Emergencies of Abdominal Disease," "The Gifts of Surgery to Medicine," "The Surgery of the Chest in Relation to Retained Projectiles," and "The Most Gentle Profession." Anything from the pen of Moynihan is more than worthwhile. He is one of the outstanding figures in the surgical world of the day, facile of tongue, pen and knife. The profession is indeed fortunate to have under one cover these few essays, even though they are but a moiety of the contributions of the author to the advancement of the surgical specialty.

A Manual of Surgery for Students and Physicians. By Francis T. Stewart, M.D., Professor of Clinical Surgery, Jefferson Medical College; Surgeon to the Pennsylvania Hospital. Fifth Edition, with 590 Illustrations. Philadelphia, 1921: P. Blakiston's Son & Co. The fifth edition of this "Manual of Surgery" is the posthumous offering of the lamented Doctor Francis T. Stewart, whose untimely death, on February 4, 1920, shocked his friends and admirers. Fortunately, he had practically finished the revision of the book, but it was left to his friend, Doctor Walter Estell Lee, to add the experiences acquired during the Great War, and to supervise the publication of the work. The present edition is very much more compendious than its predecessor, and, really, has outgrown its title of "A Manual," and deserves to be called a Text-Book on Surgery. Not only has the text been entirely revised, but many of the chapters have been completely rewritten and much new matter introduced. It is a safe and up-to-date work, and as such we recommend it to students and physicians.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Title of Publication: "Bulletin of the School of Medicine," Official Publication of the University of Maryland.

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State of Maryland, City of Baltimore, ss.:

Before me, a Notary Public in and for the State and City aforesaid, personally appeared Nathan Winslow, who, having been duly sworn according to law, deposes and says that he is the editor of the "Bulletin of the School of Medicine," Official Publication of the University of Maryland, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher: University of Maryland, Baltimore, Md. Editor: Nathan Winslow, Baltimore, Md. Managing Editor: Nathan Winslow, Baltimore, Md. Business Managers: R. Winslow, W. S. Gardner, J. M. Rowland, Baltimore, Md.

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Sworn to and subscribed before me this 21st day of September, 1921.

(Seal)

Eleanor H. Muhly.

(My commission expires May 1, 1922.)

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NASAL OBSTRUCTION AS A FACTOR IN PRODUCING ASTHENOPIC SYMPTOMS—WITH REPORT OF CASES.

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My object in reporting the following cases is to direct more attention to a routine examination of the nose in cases with low grade refraction errors which present all the symptoms of asthenopia, such as dull frontal headache, pain in the eyes and orbit, sensitiveness and a heavy feeling at the bridge of the nose, chronic catarrhal conjunctivitis and inability to use the eyes for any great length of time.

In cases presenting such symptoms of asthenopia, the oculist naturally thinks that all the trouble can be relieved by the proper correction with glasses. Often, to his disappointment, the patient returns complaining as much or more than ever, and it is not until later after a high deflection of the septum has been corrected, a spur removed or possibly a hyperplastic middle turbinate has been resected that the condition is entirely relieved, and it is unnecessary to use glasses.

This particular type of case generally goes to the oculist instead of to a rhinologist, because in the first place, people have been pretty well taught that eye strain is the cause of nearly all headaches. Secondly because there may be no nasal discharge, which as we know now is not the important symptom in indicating nasal pathology it once was, for as a matter of fact in this particular type it is indeed unusual to have nasal discharge.

Another symptom, difficulty in nasal breathing, which is generally known to the lay mind as a distinctive anomaly, is not always manifest. A patient may go for years with one side of his nose practically occluded without noticeable inconvenience, as long as he has plenty of breathing space on the other side.

We are indebted to Sluder for the pioneer work in this group of cases. He has described[1] them as vacuum frontal headaches with eye symptoms only. His observations have been that few of the cases present definite nasal symptoms. No nasal discharge, no clouding of the sinuses, but constant dull frontal headache with tenderness under the floor of the frontal sinus at the upper inner angle of the orbit near the attachment of the pulley of the superior oblique muscle, the so-called Ewing sign.[2] This sign is really the only characteristic symptom of this condition.

It was first demonstrated by Ewing in 1900, and is produced by exerting a point of pressure where the pulley of the superior oblique muscle is attached to the orbit. In his book on "Headaches and Eye Disorders of Nasal Origin," Sluder[3] has given an excellent account of the causes producing this condition. A brief summary of his observations show the underlying factors to be the result of some mechanical nasal obstruction which interferes with the drainage and ventilation from the sinuses, particularly the frontal. A vacuum is created with consequent congestion of the lining mucous membrane with secondary involvement of the thin bony wall, so that any pressure exerted at this point produces tenderness. The pulley of the superior oblique is attached to the thinnest part of this bony wall so that any act of accommodation or movement of the eye produces a tugging at this point sufficient to produce a constant dull frontal headache.

The nasal obstruction may be an enlarged middle turbinate which completely blocks the inlet to the frontal sinus. A very common cause is a high deviation of the septum which in the same way prevents the proper drainage and ventilation of the frontal sinus. Other causes to be enumerated are: Lack of development of the vault so that the middle turbinate may be pressed against the outer wall. Swelling of the soft tissues causing an edema of the vault with later development of polyps. Empyemas and coryzas which have become cured but have left enough hypertrophy in the vault of the middle meatus to close off the ventilation of the frontal sinus.

Report of Cases.

No. 1—Mrs. G. L., aged 43, consulted me in October, 1919, for relief of constant frontal headache. She had been refracted a number of times and proper correcting lenses given without improvement of her condition. Glasses felt very heavy over bridge of nose and altogether were very irritating. Very nervous. Appetite poor. Did not sleep well. Nose congested on left side most of the time with obstruction to breathing. Persistent frontal headaches with a dull heavy feeling between eyes. Tenderness under floor of left frontal sinus. Transillumination and X-ray showed no clouding of sinuses. Septum had a high deviation to the left side pressing on middle turbinate.

Treatment—On October 20, 1919, a submucous resection was performed and deviation corrected. No complications. Patient had an uneventful recovery and in a week all disagreeable symptoms had disappeared.

Since operation she has had no headache, no nasal symptoms and her nervousness has disappeared. She has gained ten pounds in weight and feels fine.

No. 2—Mrs. C. H., aged 36, was referred to me for treatment of severe frontal headaches. She complained of pain in her eyes. Headaches, which became very severe at times. Difficulty in using her eyes any great length of time. No relief of symptoms by glasses.

Examination of nose showed great hypertrophy of both middle turbinates. X-ray and transillumination of sinuses were negative. No nasal discharge. Tenderness at upper inner angle of orbit. Under local anesthesia the anterior third of middle turbinates were resected which has given patient permanent relief.

No. 3—Mrs. R. C., aged 34, complained of constant frontal headache, pain in eyes, nervousness and irritability, frequent attacks of vertigo, a congested and heavy feeling in the nose. Her refraction error had been corrected several months previously, but symptoms of asthenopia persisted. She gave no history of nasal discharge, sinuses were clear by transillumination and X-ray examination. No postnasal discharge. Ewing's sign present. The septum showed a very high deviation to the left which obstructed the naso-frontal duct.

After correction of the deflected septum by a submucous resection her symptoms cleared up and she has had no subsequent trouble.

No. 4—Mrs. E. H. gave a history of constant frontal headache and pain between her eyes. She had been refracted, but glasses did not relieve her symptoms. Examination of her nose showed a rather high posterior deviation to the right. There was no nasal discharge. Sinuses were negative by transillumination and X-ray examination. In fact, nasal and physical examination were negative except for septal deviation.

The deviation was corrected by a submucous resection. Since that time all symptoms have cleared up and there has been no recurrence.

No. 5—Mrs. H. K., aged 35, complained of pain in her eyes after reading. Lids were injected a great deal of the time. There was some difficulty in breathing. No nasal discharge. Some pain across the bridge of the nose. Patient had been refracted and results checked up a number of times, but asthenopic symptoms were not relieved, after which she was referred to me for investigation of the nose as the probable cause of the above symptoms.

Examination showed a fairly straight septum, but the middle turbinates were very large and pressing against the septum. X-ray examination and transillumination showed all sinuses to be clear. It was apparent that most of these symptoms were the result of hypertrophied turbinates, so local treatment was instituted to shrink the congested turbinates. After a few treatments the symptoms cleared up and the patient has had no further trouble.

SUMMARY.

1. Many obscure cases presenting typical asthenopic symptoms which have not been relieved by refraction can be cured by the proper nasal treatment.
2. Most of these cases come primarily to the oculist, for their symptoms are suggestive only of eye involvement.
3. None of the cases complained of nasal discharge or annoying nasal symptoms. No clouding of sinuses.
4. Every thorough eye examination should be accompanied by a nasal examination.

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PRURIT~~I~~US.

HARRY M. ROBINSON, M. D.

Itching is probably the most frequent subjective symptom that is encountered as a human complaint, and, while most often met with in the course of a physician's work, it is not infrequent in those apparently healthy. It may be mild and evanescent, or it may be severe and resistant to all our known empiric remedies. In former years when the more annoying and persistant phases of general itching were met with, and the etiological factors were obscure, the name pruritis (from the Latin, prurire, meaning to itch) was given and these conditions were termed primary or iodiopathic neuroses. Under this heading were placed those continued or intermittent attacks of severe itching, where no lesion was seen and no cause was detected. But in these later years it has been shown that many of the cases of idiopathic pruritis were merely unknown or uncommon symptoms of various diseases such as latent syphilis,[1] tabes,[2] diabetes, drug ingestions, food anaphylaxis, constipation, and external factors such as heat and clothes.

So, that now pruritis is more frequently considered as a symptom even when the cause is not readily discernible; and the search for the disease which it accompanies is receiving the necessary attention.

It is undoubtedly a neurosis, but only in so far as some definite cause or toxin is disturbing the end nerves; and it is that cause which it is the problem of the physician to ferret out and get rid of. It may be a metabolic factor, it may be some external influence or it may be that obscure condition, excess or insufficiency of endocrine secretion.[3] But whatever it is, we are surely nearing the stage where local applications such as phenol, liquor carbonis detergens or X-ray, given as a venture, will be less frequent and the definitely indicated therapeutic agent will be prescribed. It will not be necessary to do a Ball operation[4] or an alcoholic injection[5] in pruritis ani, for it may be true that the cause is streptococcus faecalis[6] or Bac. coli communis infection,[7] and a vaccine will eliminate the cause and the itching. It may even be possible that senile pruritis is an endocrine condition which we should try to demonstrate. But it is undoubted that many if not most of the cases of itching are toxemic or anaphylactic in origin and the proper diet must be prescribed.

It should not be sufficient for a physician to give haphazard dietary directions to all patients alike, whether with acne, eczema, urtricaria, rosacea or itching,—and to say "Don't eat candy, cake, ice cream, meats or fried thing," for it is just possible that those may be the articles which are not anaphylactic, and we make no headway. Because as Highman[8] quotes, "what is one man's meat is another man's poison," and shows that carrots alone can cause urticaria, in some patients.

Therefore, there should be a definite procedure in all dermatoses of unknown origin. Undoubtedly the right way would be to make each patient undergo a thorough metabolic and excretory examination such as Dr. McElfresh of the University Hospital has done so ably for so many years. Then, the patient's food and fluids should be supervised as taken in and a chemical, microscopical and quantitative analyses should be done on all excreta (feces, urine, sweat). There should be an examination of the gastric contents and the urea and sugar contents of the blood obtained. This would be ideal. But as it is practically not feasible for want of ward facilities, we must be satisfied with the next best methods. With Highman,[8] we have not had very reliable results with the sensitization test with dried foods, but in absence of better tests, they should be employed. Another test would be to examine the feces[9] chemically and miscropically for metabolic insufficiency with some assurance of success. And in addition to this latter examination I have insisted on the patient keeping what I call a food diary. While this idea is imperfect, it is yet somewhat better than the routine taboo which all patients receive. If, as has been shown, that certain patients were kept free from itching and urticaria by eliminating from their diet such simple articles as carrots, in one case, buckwheat in another, it is wrong to tell all patients to refrain from the same articles of diet. Although I have found that coffee was alone the disturbing element in 8 cases of pruritis and a cure resulted by forbidding it, yet we have seen many patients who never have had ill effects from coffee although partaking of it for many years.

The examination of the feces will show among other things, what is not being digested and the food diary should show whether the patient eats regularly and what articles most frequently and in excess.

I append here a sample page from diary of Miss W. C., condition, general itching with two small patches of dermatitis:

FOOD DIARY.

SUNDAY.

Breakfast, 10.30.
Grape Fruit. Toast with Butter.
Fried Scrapple
Milk.

Dinner, 5 *P. M.*
Milk.
Pork and Sauerkraut.
Mashed Potatoes. Corn.
Pineapple.

Apples and Peanut Butter all Afternoon.

MONDAY.

Breakfast.
Scrapple. Toast with Butter.
Lunch.
Bottle of Milk.
Tongue Sandwich with Butter.
Candy all Afternoon.

Dinner.
Broiled Chicken.
Olives.
Waffles with Butter.
Boiled Potatoes.
Jello.

TUESDAY.

Breakfast.
Grape Fruit. Scrapple.
Toast with Butter.
Milk. Cocoa.
Oysterettes all Afternoon.
Lunch.
Boiled Beef. Mashed Potatoes.
Bread and Butter. Milk.
Strawberry Ice Cream.

3 *P. M.*
Ham Sandwich.
Half Orange.

Dinner.
Boiled Ham.
Boiled Potatoes.
Boiled Cabbage.
Bread Pudding.

Stopping candy and insisting that nothing be eaten between meals relieved the itching very much. Scrapple and pork meat also interdicted.

REPORT OF CASES.

In a collection of 26 cases the following were found apparently to be the causes:

In 8 cases (already mentioned), coffee was the irritant. One woman with an itching of 6 weeks duration had been using calamine lotion with no results. Food Diary showed she drank at least 10 cups of coffee a day. Cured on stopping coffee. Another frequently took 8 to 10 cups at one meal. When told the probable cause, she stopped coffee; result immediate relief.

One case, due to grape fruit eaten three times a day.

One case, due to tomatoes.

Two cases, the itching occured when the skin dried after profuse sweating. Frequent bathing advised, with beneficial results.

One case, patient itched markedly only when excited.

Two cases, latent syphilis, Wassermann positive, no apparent lesions.

In 9 cases, where I could not find the cause, and all others of metabolic origin, I gave six injections of Adrenalin Sol. 1-1000, 10 minims every other day, with improvement in all. The slight pallor and nervous tremor following the injection was not severe enough to consider contraindicative.

In conclusion, while I have found, as have other men,[7] that adrenalin injected subcutaneously in from 5 to 10 minim doses often helps very much in these food toxemias, it should not degenerate into an empiric therapeutic agent, given in all cases of itching, without search for the cause, which may even be more apparent than the above mentioned.

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MESENTERIC THROMBOSIS

J. M. HUNDLEY, SR., M.D., NATHAN WINSLOW, M.D., AND
J. M. HUNDLEY, JR., M.D

Mesenteric thrombosis is sufficiently unusual to warrant the reporting of all such cases. We, therefore, desire to place on record two cases which came under our observation. Both were seen at the University Hospital. In neither was the actual condition suspected prior to operation. One was taken for a ruptured duodenal or gastric ulcer, the other for a volvulus. The patients were men, aged 36 and 38 years respectively; both died. Stoppage of the mesenteric vessels occurs in two forms, acute and chronic. The artery alone, the vein alone, or both simultaneously may be blocked, and the frequency is in the order named. The superior mesenteric vessels are more frequently affected than the inferior. Notwithstanding the superior mesenteric is an end artery, it has been found, at autopsy, completely obliterated, without apparent change to the portion of the alimentary canal it supplies. Virchow reported two such cases. The case of Chiene (Jl. Anat. and Phys., 1868, part III, p. 65) is still more remarkable. The observation was made in a female who died at the age of 65, of paralysis. Amongst other things the pathology showed an aneurism of the abdominal aorta from the lower pole of which the inferior mesenteric artery issued and a studding of the aortic walls with atheromatous patches. The celiac axis with the exception of its first half inch had been converted into an impervious cord and the mesenteric arteries were in a similar condition, yet with such widespread circulatory disturbances there were no changes in the stomach or intestines, proving that a slow closure by affording an opportunity for the formation of an adequate collateral circulation is not always prejudicial to life. On the other hand when the stoppage is sudden, death inevitably results from gangrene and peritonitis, unless prompt operative measures are instituted, and even then according to Jackson, Porter and Quinby (Jl. Amer. Med. Assoc., 1904, Vol. I, p. 1469, and 1904, Vol. II, pp. 29, 110, 183) the mortality is 92 per cent. Schley attributes the high death rate to indecision in diagnosis and tardy operation. This is undoubtedly true in those cases where the damage is limited to a coil or two of intestine, but does not apply when almost the entire small and a goodly portion of the great gut are gangrenous.

Case I.—W. B., white, male, aged 36, electrician, was admitted to the University Hospital, July 29, 1920, for a ruptured duodenal or gastric ulcer. He had been suffering with indigestion and constipation for several months. During the last month of his illness he experienced considerable pain on defecation. Fourteen hours before he was brought to the hospital he was seized with an acute abdominal pain. On admission examination showed a boardlike belly, the pulse was thin and fast and the expression was very anxious. He was evidently a very ill man. The symptoms were so puzzling that a positive diagnosis was not ventured, but it was thought he was probably suffering with a ruptured gastric or duodenal ulcer. Operation was suggested and accepted. So he was made ready and taken soon thereafter to the operating room, where under gas anesthesia the abdomen was opened by a long right rectus incision. Upon retraction of the abdominal walls, a coil of moderately distended, bluish-black intestine popped into the wound. This proved on closer investigation to be large bowel. The discoloration began in the cecum, thence extended up the ascending colon, across the transverse, down the descending, around the sigmoid and on to the rectum where it was brought to a sudden check by an annular carcinoma which had failed of detection by a digital exploration per annum because of its height. The stomach and intestines were apparently unchanged. The patient went into collapse immediately the operation was begun and died on the table. Fearing an autopsy would be denied, a hasty search was made for the cause of the gangrene, as it was not thought the carinomatous rectum could possibly produce such widespread destruction. This investigation led to the detection of extensive thrombosis of the lower mesenteric veins. Whether a bacterial invasion occurred through the site of malignancy would be merely a guess. Unfortunately a culture was neglected.

Case II.—R. F., white, male, aged 38, was admitted to the University Hospital, June 22, 1921, for paroxysmal pain in the upper abdomen. Four days before he was suddenly seized with severe, colicky pains which were distributed throughout the abdomen. Under the impression that a cleansing of the intestinal canal might prove beneficial he took a laxative which was effectual. The day following developed nothing new, but the pain was by this time more severe and had definitely localized in the lower left abdominal quadrant. He had on that day several copious movements. The next day, the patient felt much worse. The pain was as severe as ever, and he had begun to vomit a dark brown fluid. On the morning of admission a large quantity of bloody water was passed per rectum. The vomiting still persisted and there was no abatement of the pain. The abdomen was moderately distended and sore throughout. The muscles at the bottom of the abdomen on the left side felt slightly more tense to touch than elsewhere. The temperature was 99½ F., pulse 80, respirations 20, the white cells, 20,200. A volvulus was suspected and operation advised. Under ether, the abdomen was opened by a long low left rectus incision. When the peritoneum was incised, coils of bluish-black gut presented in the wound. A rapid inspection showed the lower two-fifths of the jejunum and all of the ileum except the terminal two or three inches black but the peritoneal coat still glistening. The cecum and ascending colon were mottled and deeply injected to the level of the hepatic flexure. The entire intestinal canal was moderately distended. No masses were palpable. No adhesions, bands, collapsed bowel, or free fluid was found, in fact no gross lesion sufficient to account for the widespread damage. At this time it was supposed that during the manipulation of the intestines a vovulus had been unwittingly reduced, so the abdomen was closed. The patient withstood the operation well and developed no alarming symptoms until after midnight when the pulse became weak and the mind began to wander. Shortly thereafter he commenced to vomit a coffee ground material, went into collapse, and died at 6.40 A. M., June 23, 1921.

Autopsy, 6-23-1921. Permission was granted for an inspection of the abdominal viscera only. The parietal peritoneum was everywhere dark purplish in appearance. The intestines were distended. The small was black and emitted a gangrenous odor. Its peritoneal coat was lustreless and tore readily. The mesentery was thick, studded with extravasated blood and torn easily. The large intestine was dark and deeply congested. The abdominal aorta and branches were dissected out. In the lumen of the superior mesenteric artery at a point about where it emerged from beneath the pancreas was a clot about one inch long. The intima of the aorta was thickened and showed various stages of arterio-sclerosis. In the iliacs were calcareous deposits which encroached on the lumen but did not occlude it.

Whilst the mortality in this condition is appalling, especially in the acute form, still occasionally a case finds its way into print in which operation has given relief. At the December 13, 1911, meeting of the New York Surgical Society, Green (Annals of Surg., 1912, LV, 458) presented a woman, 43 years old who had been admitted to St. Luke's Hospital, June 19, 1911. Her illness began one week before admission when she ate some food which gave her a diarrhoea and cramps for two days, and on one occasion, three days before admission she passed a tarry stool. At 3 A. M., on the day of her admission she was awakened with a severe abdominal pain. It gradually increased in severity and remained localized in the mid abdomen. She complained of much pain about the umbilicus. She was given some medication which was followed by nausea and vomiting. All the signs pointed to an intestinal obstruction, so an operation was decided upon. This was performed 16 hours after the onset of the attack. Upon opening the peritoneum a liter of reddish tinted fluid escaped. A search for the trouble uncovered a coil of reddish-black intestine arising in the left iliac fossa and extending across the abdominal cavity toward the ileocecal region. The discoloration was not uniform being lighter in some places than in other. The mesentery was red and edematous along its intestinal attachment. Despite the excision of over 5½ feet of intestine and an end to end anastomosis by button, the patient made an uneventful recovery. The pathological examination showed thrombosis of the veins in the mesentery. Another to operate successfully was Schley (Martin, Annals of Surg., 1911, LIV, 253). The patient, a man, was suddenly taken sick 24 hours before admission to St. Luke's Hospital, on December 23, 1910. Several hours after a meal there was a sharp pain across the upper abdomen. The pain was continuous from the onset. He vomited once or twice, but the vomitus contained no blood. The bowels had moved naturally the morning before the attack, but not afterwards, nor had he passed any flatus. His temperature on admission was 100 3/5 F., pulse 94, respirations 24, leucocyte count 20,000, with a polynuclear percentage of 89. The symptoms were so puzzling that no definite diagnosis was ventured. On opening the abdomen by a low midline incision, a loop of black-red gut presented. It showed a sharp line of demarkation at either end from the healthy intestine. The mesentery for from 2 to 6 inches from the attachment to the bowel was black and mottled. Bleeding from the arteries was demonstrated, but the veins were thrombosed. The diseased gut was excised with four inches of healthy bowel on either side of the involved area, and the mesentery well beyond the limits of discoloration. The continuity of the intestinal canal was re-established with a Murphy button. The patient was discharged February 14, 1911, in good condition. Elliott (Annals of Surg., 1895, XXI, 9) reports a case in which he resected 48 inches successfully, and Lindner (Koelbing in Bruns Beitraege, 1902, XXXIII,) 50 cm. The attack is ushered in with sudden, excruciating and paroxysmal pain, nausea and vomiting, followed quickly by absolute constipation or in rare instances by frequent bloody alvine evacuations. At first the temperature and pulse rate are but slightly increased, if at all. With the advent of peritoneal infection collapse becomes a prominent feature. The pulse is increased in frequency and the temperature gradually ascends. Whilst the diagnosis is not generally made until after operation, the patient will suffer none by this oversight, if his physician realizes he is dealing with an "acute abdomen" and resorts to early operation. Uncertainty should cease with the opening of the abdomen, unfortunately such is not always the case. Loop (Trans. of the Sect. on Gen. and Abd. Surg. of the A. M. A., 1921, p. 104) relates in the histories of the first two cases operated on by him, he did not appreciate the cause. This experience is common to many others and is not to be wondered at because the pathology is so bizarre, so weird and so at variance with anything ever seen before. The presence of deeply injected, glistening, plum or mahogany tinted, moderately distended coils of bowel, with no accountable cause, especially if the mesenteric arteries are pulsation-less, means either a mesenteric thrombosis or embolism. Murphy (The Clinics of, 1914, III, 627) cites as a typical example of the latter, the following case: The patient had an acute recurrence of a mitral endocarditis, which kept him in bed for seven weeks. When the acute symptoms had subsided, he left the hospital. He was practically well, with a pulse ranging from 80 to 90, a normal temperature, a normal white cell count and a moderate secondary anemia. He had been home for four or five days, when one night he suddenly called his nurse and said to her: "Something has happened; I have just had a severe pain in my abdomen." The nurse took his pulse and found it running along at the rate of 140 per minute. His doctor, when he came in the morning, examined the patient and noticed that the abdomen was sensitive on the right side. The patient then had pain, nausea and vomiting, but no elevation of temperature. Nevertheless the doctor made a diagnosis of appendicitis. Now, appendicitis, never begins with a pulse rate of 140 in the first five, six or seven minutes of the onset. In perforative peritonitis, even, it takes time for the symptoms to develop, particularly the rapid pulse. The doctor called another physician in consultation, and it was decided to operate for appendicitis. He telephoned Murphy who in the conversation over the telephone said: "You remember that man had a liver embolus during his recent attack of endocarditis, I think you ought to consider the possibility of an embolus of the mesenteric artery, because the pain and the sudden increase in his pulse rate would speak for an embolus." However, the doctor insisted on operating. The abdomen was opened and the entire intestinal tract was found gangrenous from an embolus. The abdomen was closed and the patient died. Undoubtedly experience is the best teacher, but forewarned is forearmed. As briefly and as concisely as possible we have attempted to visualize the salient features of this disease. It is neither as rare as some nor as prevalent as others would lead us to believe. At the Massachusetts General Hospital where there are about 4,000 surgical cases yearly, there were only 13 cases of this condition in 12 years (Sheahan, Trans. of the Sect. on Gen. and Abd. Surg. of the A. M. A., 1921, p. 113) and at the University Hospital, Balto., during the past three years, where approximately 2,000 operations are performed yearly only the two cases herein reported. Loop (Trans. of the Sect. on Gen. and Abd. Surg. of the A. M. A., 1921, 102) has had an unusual experience with this malady. He saw his first case Jan. 28, 1918. Since then he has operated on eight others, with 1 recovery and 8 deaths. In only two did he suspect mesenteric thrombosis as a probable cause of the sickness and in the first two he was uncertain as to the cause even after the belly was opened. In his opinion the train of events in the acute type are sufficiently characteristic to make a preoperative diagnosis possible. He presents as its peculiar syndrome; sudden violent abdominal pain, not markedly localized; persistent vomiting, usually diminished after the first few hours; slight or moderate fulness of the abdomen without muscle spasm, and a dull percussion note. Certainly the picture painted is very similar to the order of events observed by us. Admittedly such a sequence whether characteristic or not, indicates a "surgical abdomen," and demands an exploratory laparotomy. With the abdomen opened, all uncertainty should disappear. Whilst the symptoms might mimic those of acute appendicitis, peritonitis, acute ileus, intussusception, volvulus, ruptured gastric or duodenal ulcer, the pathological anatomy most assuredly does not. The significance of variable lengths of free lying, moderately distended, mahogany tinted or purplish-black, glistening bowel should no longer be misinterpreted. It is the pathological sign-post of mesenteric thrombosis, and not of appendicitis, peritonitis, intussusception or any other intraabdominal disturbance. Whilst the clinical leaning is not a matter of great concern, provided the existence of a "surgical belly," is promptly appreciated; a correct interpretation of the operative findings is of the utmost importance, if the patient is not to be deprived of his only chance for recovery. Douglas (Surgical Diseases of the Abdomen, 1909, 2nd Edit., p. 219) certainly is in error when he writes: "Though some cases run a surprisingly protracted course, all are certainly fatal, and the condition appears to be beyond remedial measures." When the disease is limited, the operation of choice is resection and anastomosis by button or suture. If the patient is too ill to withstand so protracted an ordeal the gangrenous segment should be disposed of by the most expedititious method and the open ends tacked to the margin of the skin, with a later restoration of the continuity of the bowel, if the patient survive. Each of these methods has given a small number of recoveries. When practically the entire small and a portion of the large bowel are involved, the condition is admittedly beyond the pale of surgery. How much of the small intestine can be removed and the patient survive has never been answered. Elliott extirpated four feet with recovery of the patient. This question will have to be left to the individual judgment of the surgeon. At present without operation 100% mortality is to be expected, with operation from 10 to 20% cures. Though the death rate from the nature of the malady will ever be appalling, with greater familiarity the percentage of cures should show improvement. But after all, its prevention is ever so much more important than its cure. Much can be accomplished in this line by the use of the utmost gentleness in the handling of the viscera during abdominal operations and a proper course of treatment in those ailments which are prone to vascular occlusion by thrombi.

CONCLUSIONS.

1. Mesenteric thrombosis is relatively more common than supposed.
2. Cases have been overlooked through unfamiliarity with its appearance, by confounding it with other diseases, and by neglecting to request or at any rate to obtain an autopsy in patients dying with intraabdominal disturbances.
3. The symptoms are only suggestive, but the pathology is distinctive of mesenteric occlusion.
4. Prevention is ever so much more important than cure.
5. According to different estimates, the percentage of cures range from 10 to 20% in the cases subjected to early operation.
6. No acute case has been known to recover without operation.
7. It is a possibility, but not a probability, in every severe gastro-intestinal crisis.

THE RELATIONSHIP BETWEEN ANO-RECTAL AND CONSTITUTIONAL DISEASES.

G. MILTON LINTHICUM, A. M., M. D., F. A. C. S.,
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The relationship between ano-rectal and constitutional diseases needs be considered from two viewpoints; first, rectal diseases may produce constitutional disturbances, and second, general conditions may cause alterations within the large gut.

A survey of a patient, suffering from an obscure malady, should include a rectal examination. Failure to employ this precaution means the neglecting of a source of information of the greatest importance. It is equally as myopic to regard rectal disease as a separate entity with no bearing on constitutional changes. Normally no organ of the body functions independently of the other organs and it of necessity follows that there is no part, whose function and activity is interferred with by disease, which does not to a greater or less degree affect other parts adversely. As in society there are individuals closely affiliated, whose activities are reciprocally affected in consequence of this close relationship; so in the human body the diseases of an organ affect directly the other organs of the same system. Carrying this argument a little further, members of society with a relationship of birth are still more acutely affected by the activities of beneficence or malevolence than others less closely related. In like manner, any organ of the same embryological origin will manifest more marked symptoms when one or the other is injured. An excellent exemplification of this, is the development from a common origin (the Wolffian bodies and the Muellerian ducts) of the rectum and genito-urinary system. In consequence of this an ano-rectal lesion will often produce bladder or prostatic symptoms. While the perversions sometimes found further establishes this close nervous connection.

A study of the communicating vascular supply of the rectum and liver, readily explains the formation of internal hemorrhoids, rectal congestion, as well as hepatic involvement in rectal malignant growths.

The flow of the lymph through the inguinal glands, easily explains the cause of adenitis, developing in conjunction with an anal lesion, which is too often erroneously regarded as having a genital origin.

The distribution of an abundant supply or sensory nerves to the anal canal accounts for the intense pain in anal lesions, even though the lesion may be comparatively insignificant; while above the anal canal, the deficiency of sensory nerves permits great destruction of tissue without the production of real pain. This is the reason why malignant growths may go on to the point of breaking down without its presence being suspected by either the patient or his physician.

Without doubt the most frequent rectal lesion is fistula. At St. Luke's Hospital, London, an institution devoted exclusively to the treatment of rectal diseases, one-third of their dispensary and two-thirds of their ward cases are fistulae.

Like any chronically discharging sinus, the fistula in ano has a habit of invading more and more tissue. This phenomenon is explained by the lowering of the resistance of the perirectal tissues by the bacteria or their toxins. It must ever be borne in mind that these sinuses by affording an opportunity to bacterial emboli to enter the blood stream are potential foci of metastatic arthritis or even valvular heart disease.

This is not an inopportune time to emphasize the true relationship between fistula and tuberculosis. It is no uncommon occurrence to hear medical men make the statemnt, 90% of fistulae are tubercular. I join issue with this extravagant assertion. From my own experience and the observations of others, qualified to express an opinion, I believe not more than 10% of these fistulae are of tuberculous origin. The sallow, pasty, cachectic facies of an individual with a long standing fistula, doubtlessly is largely responsible for this wide-spread impression. Several years ago I reviewed the clinical histories of about twelve hundred cases at the Maryland Hospital for Consumptives and found that only 16 (1.3%) had or had had a fistula. Of this number 14 were patients classified as advanced or hopeless tuberculosis. Of 1,000 tubercular bodies autopsied in the Munich Hospitals, 566 showed tuberculous ulcerations of the intestines. It is generally admitted that primary tuberculosis of the rectum is extremely rare. In the face of this evidence, I believe the general surgeon of the past erred in crediting the tubercle bacillus with such an important role in the production of fistula in ano.

In a considerable number of a small group of ward cases, I obtained a positive Wassermann, consequently I think syphilis should be given consideration when seeking the cause of a fistula in ano.

Hemorrhoids, a not uncommon rectal involvement, may give no constitutional disturbances and one may even go through life unconscious of or indifferent to their presence. On the other hand, in an individual of less phlegmatic disposition, the nervous equilibrium may be entirely shattered, as manifested by the appearance of all sorts of reflex phenomena, viz., derangements of the gastric, optic and mental systems; and under the stress and strain of his ills, the sufferer becomes a neurasthenic or hypochondriac. The continued loss of blood may be so great as to produce profound anemia and exhaustion. When painful, to the other nerve symptoms is added constipation, produced by the dread of pain at stool, causing delay and postponement until the normal rectal reflexes are lost. Hemorrhoids are often the sign-posts of intra-abdominal pressure by tumors, of obstructed venous circulation in cirrhosis of the liver and of stasis in weakened heart conditions. Hemorrhoids associated with enlarged abdominal veins, forming a crown around the umbilicus (caput Medusæ) are almost pathognomic of a contracted liver. High blood pressure is often manifested and sometimes relieved by hemorrhagic hemorrhoids. In passing it might be well to state that such bleeding is often of marked benefit, acting as a safety valve to relieve tension. Such hemorrhoids are often best left undisturbed. The sudden appearance of a mass of piles in an individual not hitherto affected, is suggestive of a rectal growth.

Pruritis ani varies from the pleasurable sensation derived from scratching, to a most distressing discomfort, producing, indeed, in its exaggerated form a state more difficult to bear than actual pain. Because it is so often associated with diabetes and nephritis, these diseases should always be considered as a possible causative agent.

While the craze is on for the removal of the teeth, in search for foci of infection, the small crypts around the anal orifice should be borne in mind as possible points of infection and should be carefully investigated before all teeth are sacrificed.

CONSTIPATION.

Voltaire says in one of his writings, "Persons who have an easy and regular movement every morning as readily as one spits, after they have breakfasted, are the favorites of nature. They are sweet, affable, gracious, thoughtful, complaisant and efficient, a no in their mouth has more grace than a yes in the mouth of a constipé."

Hamilton in 1805 gave a remarkable list of diseases caused by constipation, which was so complete and extensive that few have since been added.

Lane is perhaps the most ardent of present day authorities in ascribing pathological conditions to constipation. His list includes almost every known disease from cancer of the breast to flat-foot. He states that the harm done by intestinal stasis is infinitely greater and more far reaching than that ascribed to alcohol. In a similar way an extraordinary array of symptoms were ascribed by Hack and his followers to tumefaction of the nasal mucosa, by Bouchard to autointoxication from a dilated stomach and by Haig to uric acid poisoning. It is quite evident that while each may be a factor in some cases, there is no condition warranting the importance attached to it by such enthusiasts. While I believe intestinal stasis is responsible for more discomfort than any other non mortal disease, I cannot agree with the radical stand, taken by Lane in a recent article when he states, that after twenty years' experience he is so convinced of the importance of intestinal stasis, that he would advise the removal of the colon in every case of rheumatism, goiter and Addison's disease when accompanied by such signs of autointoxication as depression, cold hands and feet and abdominal discomfort, if the stasis is confirmed by the X-ray.

There is no doubt, that constipation causes manifold symptoms and conditions. The peculiar form in which it expresses its presence depends largely upon the susceptibility of the individual and its effects are as variable as are the constitutions of different people. This individuality can no more be explained than the idiosyncrasies of susceptible people to indiscretions in diet. In one the dyscrasia manifests itself as hay fever, in another as urticaria, in still another as eczema and in yet another as hypertension. This mysterious behaviour is called anaphylaxis. One individual may go for days without a bowel movement and feel perfectly well. as illustrated by the following case reported by Hurst, a French Army Surgeon had always been constipated, having a stool about every two months, until he reached the age of 42 years when the frequency had diminished to two or three a year (at which time it was doubtless an event in the community). He had always felt

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well and had had a good appetite until the age of 54 when he was attacked with cramps and vomiting from which he died. Autopsy showed an enormously dilated rectum and sigmoid, the lumen of which contained 60 lbs. of feces. On the other hand the missing of a daily stool will cause in many a feeling of malaise, discomfort and headache. To what to ascribe the symptoms produced by constipation is as yet an unsettled controversy, and while the theory of absorption, the so-called auto-intoxication, is now generally accepted, there is no doubt but that the mechanical pressure against the contiguous structures by accumulated feces does produce by pressure upon the nerves many of the reflex symptoms.

Bacteriemia is today of exceedingly great interest in the study of kidney lesions. It has been most carefully studied by Adami who showed that the intestinal lymph nodes of healthy animals always yield cultures of the same bacteria as the liver and spleen. He found that these organisms were carried there by the leucocytes through the lymphatics to the blood and normally were destroyed in the liver and the spleen, but when either by lowered resistance or an overload of bacteria failed to accomplish the destruction of these germs, they were eliminated by the kidneys. In this wise not infrequently is the origin of bacteriuria and pyelitis to be explained, even pyelonephritis should there be a blocking of the ureter by pressure, kinking or stricture. The urine of normal individuals contains no bacteria, but the colon bacillus was found in three of twenty constipated cases by Dudgeon. The kidney infection may possibly occur by direct invasion on account of its nearness to the colon. The infection may take place through the lymphatics especially if the kidney be congested from a kinking of the ureter or from pressure of the colon against it. Adami believes inflammations of the genito-urinary tract of the nature under discussion may be the foci from which an arthritis or a rheumatism may take its origin. Some of the nervous disturbances, such as backache and sciatica are due to direct pressure of the distended rectum upon the sacral plexus, indeed sciatica was treated at the end of the 18th century by Nomnimus of Naples, by washing out the rectum. Difficult micturition in old men is sometimes due to the pressure on an enlarged prostrate by fecal accumulation. Nocturnal eneuresis of children may be due to a bacilluria, to fecal pressure on the neck of the bladder, or to compression of the four sacral nerves which control the bladder.

Headaches are familiar to all as a result of constipation, as is mental and physical fatigue. Infantile convulsions and epilepsy are often inaugurated by intestinal derangements. That reflexes either from pathological changes in or an overloaded rectum do affect the heart and lungs, through the recto-cardiac and rectorespiratory nervous mechanism, is shown by the increased heart and lung activity observed when the anal sphincter is being dilated when the patient is under an anesthetic. This fact should be taken cognizance of in patients suffering with asthma or heart lesions.

Muco-membranous colitis is always associated with a long standing constipation found in nervous, depressed, irritable, sometimes melancholic individuals, classified as neurasthenics. Most observers contend that constipation is the cause, but many neurologists look upon constipation as a result of the nerve pathology. A lengthy discussion of these divergent views would be without profit. It has been my experience that relief of the colitis and the associated nervous instability is contingent upon the relief of the constipation and not the reverse. In the meanwhile sight should not be lost of colitis as an indication of the presence of cancer of the colon. This is a sign of the greatest importance, a danger signal of malignancy in the lower alimentary canal. When present carcinoma must be considered as a possibility of its source.

Conclusions.

1. Rectal lesions are productive of constitutional symptoms.
2. Rectal disorders may be a manifestation of a constitutional disease.
3. Reflexes from the ano-rectal region may produce gastric disturbances, or in rare instances have a direful influence upon the heart or lung action.
4. The absorption from local foci or fecal stasis may produce infection of or degenerative changes in the kidney or in other organs, or may so lower the resistance by toxemia that the individual is more susceptible to disease and is a poor risk in a serious illness or operative procedure.
5. A combination of intestinal toxemia and reflex disturbance may result in a general upset with nervous manifestations, leading to melancholia.

Dr. M. M. Savage, who has been attending eye, ear, nose and throat courses in Vienna, has returned to his home in Baltimore and resumed practice.

BOARD OF TRUSTEES ENDOWMENT FUND UNIVERSITY OF MARYLAND.

REPORT OF B. MERRILL HOPKINSON, M. D., TREASURER,

Covering the Period January 12, 1920, *to January* 10, 1921.

FACULTY OF PHYSIC FUND.

January 13, 1920, balance Central Saings Bank		$557.92
April 15, 1920, interest Central Savings Bank		5.27
June 14, 1920, James Holmes, M. D		3,00
June 14, 1920, Hector J. MacLean		5.00
October 1, 1920, interest, Central Savings Bank		13.30
Oct. 1, 1920, Louisville Gas and Elec. Co. 7% Gold Note redeemed		1,000.00
January 10, 1921, interest on bonds to date		1,553.75
		$3,138.24
Deduct:		
June 6, 1920, Baltimore County 5¾% Bond	$1,013.73	
September 17, 1920, Minneapolis Coupon Returned	25.00	
October 1, 1920, 1 1,000 Grand Trunk, Canada, 7% Debenture Bond and interest	1,000.94	
December 16, 1920, Premium Treasurer's Bond	12.50	
		2,053.17
January 10, 1921, balance Central Savings Bank		$1,085.07

This fund consists of:

2	1,000	Am. Agricul. Chem. Co. 5% Bonds	1,963.06
7	500	Cent. Hudson Gas & Elec Co. 7% Deben. Bonds	3,500.00
1	1,000	Ga., Car. & Northern 5% Bonds	1,000.00
5	500	Regents Univ. of Md. 5% Bonds	2,500.00
1	1,000	Pub. Serv. Corp. of N. J. 5% Bonds	1,000.00
1	1,000	Minneapolis Gas Light 5% Bonds	1,000.00
1	1,000	Electric Co. Edison 5% Bonds	1,000.00
1	1,000	Fairmount & Clarksburg Trac. Co. 5% Bonds	1,000.00
1	1,000	Consol. Gas Co., Balto. City, 4½% Bonds	980.00
2	1,000	Omaha & Council Bluffs St. Ry. 5% Bonds	1,940.00
2	1,000	Cincinnati Gas Trans. Co. 5% Bonds	1,960.00
2	1,000	West Pann Power Co. 5% Bonds	1,940.00
2	1,000	Cumberland Co. P. & L. Co. 5% Bonds	1,940.00
1	500	First Liberty Loan 3½%	500.00
2	1,000	Louisiana Port Serial Com. 5% Bonds	2,000.00
3	1,000	Third Liberty Loan 4¼% Bonds	3,000.00
2	1,000	Fourth Liberty Loan 4½% Bonds	2,000.00
1	500	Fourth Liberty Loan 4½% Bonds	500.00
1	1,000	Balto. Co. 5¾% Bond	1,000.00
1	1,000	Grand Trunk of Canada 7% Bond	1,000.00
			$32,808.13

GENERAL ENDOWMENT FUND.

January 12, 1920—Baltimore Central Savings Bank		$955.74
May 5, 1920—Interest, Central Savings Bank		9.50
October 2, 1920—Interest, Central Savings Bank		12.97
January 10, 1921—Interest on bonds to date		538.75
		$1,516.96
Deduct:		
May 26, 1920—Box Colonial Trust Co	$5.00	
July 6, 1920—1 1,000 Balto. Co. 5¾% Bond and interest	1,013.74	
		1,018.74
January 10, 1921—Balance Central Savings Bank		$498.22
This fund consists of:		
1 500 Regents Univ. of Md. 5% Bond		500.00
1 1,000 Ga. and Alabama 5% Bond		1,000.00
1 1,000 Ga., Car. & Northern 5% Bond		1,000.00
1 1,000 Omaha and Council Bluffs R. & B. 5% Bond		1,000.00
1 1,000 Consol. Coal Co. 6% Bond		1,000.00
2 500 Consol. Co. 6% Bonds		1,000,00
2 1,000 St. Jos. Ry., L., H. & Power Co. 5% Bonds		2,000.00
1 1,000 Edison Elec. Light Co. 5% Bond		1,000.00
1 500 First Liberty Loan 3½% Bond		500.00
1 1,000 Third Liberty Loan 4¼% Bond		1,000.00
1 500 Fourth Liberty Loan 4¼% Bond		500.00
1 1,000 Baltimore County 5¾% Bond		1,000.00
		$11,998.22

LAW FUND.

January 12, 1920—Balance Central Savings Bank	$161.43
April 1, 1920—Interest, Central Savings Bank	1.60
October 1, 1920—Interest, Central Savings Bank	3.20
	$166.23

PHARMACY FUND.

January 12, 1920—Balance Central Savings Bank	$20.05
April 1, 1920—Balance Central Savings Bank	.20
May 26, 1920—Henry P. Hynson, Ph. D	25.00
October 1, 1920—Interest, Central Savings Bank	.73
	$45.98

RANDOLPH WINSLOW FUND.

January 12, 1920—Balance Central Savings Bank	$68.91
April 1, 1920—Interest, Central Savnigs Bank	.65
Octber 1, 1920—Interest, Central Savings Bank	.50
January 10, 1921—Interest on bonds to date	125.00
	$195.06
Deduct:	
June 17, 1920—Scholarship N. de Cordona, $125.00	125.00
January 10, 1921—Balance Central Savings Bank	$70.06
This fund consists of:	
5 500 Regents Univ of Maryland 5% Bonds	2,500.00
	$2,570.06

DAVID STREETT SCHOLARSHIP FUND.

March 10, 1920—Recd. from Randolph Winslow, M. D., Chk. 4447	$17.88
October 1, 1920—Interest, Central Savings Bank	.40
January 10, 1921—Interest on Bonds to date	16.88
January 10, 1921—Balance Central Savings Bank	$35.16
This fund consists of the following bonds:	
Received from Randolph Winslow, M. D., March 10, 1920:	
3 100 First Liberty Loan 4½% Bonds	$300.00
1 100 Second Liberty Loan 4¼% Bond	100.00
1 50 Fourth Liberty Loan 4¼% Bond	50.00
	$485.16

HEMMETER FUND.

January 12, 1920—Balance Central Savings Bank	$555.25
April 1, 1920—Interest, Central Savings Bank	8.32
October 1, 1920—Interest, Central Savings Bank	18.72
January 1, 1921—Interest on bonds to date	496.85
	$1,079.14
Deduct:	
Oct. 2, 1920—1 1000 Grand Trunk of Canada 7% Bond & Int.	1,001.94
January 10, 1921—Balance Central Savings Bank	$77.20
This fund consists of:	
1 1,000 Chicago City Bond 5%	1,000.00
1 1,000 Chicago Railway Bond 5%	1,000.00
1 1,000 Minneapolis St. Ry & St. Paul Ry 5%	1,000.00
2 1,000 Third Liberty Loan 4¼%	2,000.00
1 1,000 Grand Trunk of Canada 7% Bond	1,000.00
	$6,077.20

CHARLES FRICK FUND.

January 12, 1920—Balance Central Savings Bank	$366.50
April 15, 1920—Interest Central Savings Bank	3.65
October 1, 1920—Interest Central Savings Bank	7.57
January 10, 1921—Interest on Bond to date	21.25
January 10, 1921—Balance Central Savings Bank	$398.97
This fund consists of:	
1 500 Fourth Liberty Loan 4¼%	500.00
	$898.97

LEON FRANK FUND.

January 12, 1920—Balance Central Savings Bank	$114.29
May 5, 1920—Interest Central Savings Bank	1.07
October 1, 1920—Interest Central Savings Bank	1.42
January 10, 1921—Interest on Bonds to date	125.00
	$241.78
Deduct:	
June 17, 1920—Scholarship J. H. Wilkerson, $125.00	125.00
January 10, 1921—Balance Central Savings Bank	$116.78
This fund consists of:	
1 500 Cen. Hudson Gas & Elec. Co. 7% Deben. Bonds, 15 years.	500.00
1 1,000 St. Jos. H., L. & P. Co	1,000.00
1 1,000 **Omaha & Coun. Bluffs R. & B**	1,000.00
	$2,616.78

CHAS. M. HITCHCOCK FUND.

January 12, 1920—Balance Central Savings Bank		$205.58
April 1, 1920—Interest Central Savings Bank		2.05
October 1, 1920—Interest Central Savings Bank		2.43
January 10, 1921—Interest on bonds to date		250.00
		$460.06
Deduct:		
June 17, 1920—Scholarship, J. J. Krager	$125.00	
June 17, 1920—Scholarship, D. N. Ingram	125.00	
		250.00
Balance Central Savings Bank		$210.06
This fund consists of:		
10 500 Regents Univ. of Md. 5% Bonds		5,000.00
		$5,210.00

KATHERINE GIBSON FUND.

January 12, 1920—Balance Central Savings Bank	$526.29
April 15, 1920—Interest Central Savings Bank	5.25
October 1, 1920—Interest Central Savings Bank	11.02
January 10, 1921—Balance on Bonds to date	71.25
January 10, 1921—Balance Central Savings Bank	$613.81
This fund consists of:	
2 500 Regents University of Maryland 5% Bonds	1,000.00
1 500 Fourth Liberty Loan 4¼% Bond	500.00
	$2,113.81

DENTAL FUND.

January 12, 1920—Balance Central Savings Bank	$24.20
April 1, 1920—Interest Central Savings Bank	.20
October 1, 1920—Interest Central Savings Bank	.40
January 10, 1921—Balance Central Savings Bank	24.80

TOTAL PAR VALUE ON BOOKS OF ALL FUNDS.

Faculty of Physic Fund	$32,808.13
General Endowment Fund	11,998.22
Leon Frank Fund	2,616.78
Charles M. Hitchcock Fund	5,210.06
Hemmeter Fund	6,077.20
Charles Frick Fund	898.97
Randolph Winslow Fund	2,570.06
Katherine Gibson Fund	2,113.81
David Streett Scholarship Fund	485.16
Law Fund	166.23
Pharmacy Fund	45.98
Dental Fund	24.80
	65,015.40

B. Merrill Hopkinson, M. D.,

Secretary-Treasurer.

January 10, 1921.

EDITORIAL.

Medical Extension Courses.

On December 1, 1921, the Medical School of the University of Maryland inaugurated a new and far-reaching policy. On that date the first lecture was given in the medical extension course. It partook of a clinical talk by Dr. Lewellys F. Barker on the splenomegalias with an exhibition of a case of Banti's disease convalescing from a splenectomy. The clinic was given in Chemical Hall, Administration Building, and its popularity was attested by the hall being crowded to overflowing. At the second clinic, held December 8, the subject was diabetes mellitus. A case was exhibited. This patient, a woman of middle age, was about to go into diabetic coma when she was admitted to the University Hospital but under the approved methods of treating this disease had become sugar free. She was presented as an example of what modern methods can do in the way of prolonging the life of the victims of this malady. Dr. Barker said in the dietary management of these cases, the fats should be the first article of diet restricted, then the proteins and last of all the carbohydrates. The progress of the patient he measures by analyses of the blood for the sugar percentage, the urine and the carbon dioxide tension of the alveolar air and carbon dioxide in the blood plasma. After the patient has been rendered sugar free, the first article of diet to be restored is the carbonhydrate, then the protein, and last of all the fat. At least once a week the patient should observe a fast day. If acidosis impends he especially interdicted the use of bicardonate of soda, instead he said rather employ large quantities of water and get it into the body by whatever route feasible. The talk was well received by a large and enthusiastic audience, men and women from all over the State, and forbodes continued interest in the series so auspiciously begun. The course is designed for the instruction of both doctors and laymen and in a way is somewhat similar to the extension service carried on by the agricultural department of the University. As the work becomes more firmly established the service will be broadened by providing special courses in the counties. Health clinics by the professional staffs of the University of Maryland are planned for communities so situated that the residents cannot arrange to come to Baltimore. Demonstrators of special training and experience will be sent into rural districts to elucidate problems essential to the maintenance of individual and community well being. The departure is a new and radical one from which much good ought to accrue both to the University as well as the general public. Heretofore the Government has expended huge sums in the preservation of pigs, cattle, poultry, fruits and crops, and now it turns in but a humble way to the conservation of its greatest asset of all, its people. The idea is in the experimental stage as yet, but when under full operation is fraught with unlimited possibilities for good. In the final analysis an institution like an individual only justifies its existence by the measure of good it accomplishes. Its meed of usefulness is measured by the amount of service it renders the community it serves.

ANNOUNCEMENT.

A Course in Diseases of the Eye, Ear, Nose and Throat for the General Practitioner.

During the month of April, the Division of Medical Extension of the University of Maryland will offer to physicians an intensive short course in Diseases of the Eye, Ear, Nose and Throat.

For a long time a course of this character has been needed to give to the physician in general practice an opportunity to acquaint himself with recent developments in diagnosis and treatment in this field.

This is not a course for specialists, but is arranged for the general medical man. Emphasis will be laid upon training in the use of such aids in diagnosis and treatment as the ophthalmoscope otoscope, laryngoscope, bacteriological smears and cultures, the interpretation of X-ray plates, the therapeutic uses of radium, etc. In lectures, clinics and dispensary classes there will be offered a brief review of the Anatomy, Pathology and Bacteriology of the Eye, Ear, Nose and Throat, and a systematic presentation of the fundamentals in the clinical features and the treatment of the commoner diseases of the Eye, the Paranasal Sinuses, the Nose and Throat, and the Ear and Associated Structures. The present conception of the relationship of pathological processes in the nose and throat, and eye and ear to general health, to faulty development in childhood and to certain systemic diseases, such as arthritis, endocarditis, nephritis, etc., will be defined in a series of lectures by members of the Departments of Medicine, Surgery, Orthopedics, Pediatrics, etc.

As the course is to be limited to one month, a full schedule will be arranged running from 9 A. M. to 5 P. M. The schedule will be announced later.

Charges—The course will be free of charge to Maryland physicians, except for a Registration Fee of Five Dollars to pay for actual cost of printing, stamps, incidentals, etc. For physicians from other States a nominal fee will be charged.

As the course will be limited to ten men, applications should be sent promptly.

Address: Dr. J. M. H. Rowland, *Dean*,
University of Maryland Medical School.

BOOK REVIEWS.

Collected Papers of the Mayo Clinic, Rochester, Minn. 1920. Octavo of 1392 Pages, 446 Illustrations. Philadelphia and London: W. B. Saunders Company. Cloth, $12 net.

The collected papers of the Mayo Clinic, now in the 12th volume, need no introduction to the medical profession. The amount of work done in this clinic is outstanding in merit and diversity and the conclusions are based on such a wealth of material that they are authoritative. From such a wealth of reports it is impossible to pick out any single one and say that it is more meritorious than its fellows. The profession is indeed fortunate to have these contributions collected together in a single volume and no progressive surgeon can afford to be without it, as it is a clinical laboratory of inestimatable value. Listen to a partial list of the articles and then judge for yourself: A Method of Applying Radium in Cases of Esophageal Cancer, Surgical and Non-Surgical Aspects of Chronic Gastric and Duodenal Ulcers, Studies in the Physiology of the Liver, Cholecystectomy with Modified Drainage, Diverticulitis of the Large Bowel, Occluded Renal Tuberculosis, Vesico-Appendiceal Fistulas, the Surgical Treatment of Malignant Tumors of the Bladder, Conservation of the Menstrual Function, Malignant Tumors of the Thyroid, Cysts of the Pancreas, the Present Status of Splenectomy as a Therapeutic Measure, the Treatment of Pernicious Anemia by Splenectomy, Hemolytic Icterus, Surgery of Spinal Cord Tumors, Abscess of the Lung, Tumors of the Bony Chest Wall. Each and every one of these is a live question, a question of interest to not only the surgeon but also to the practitioner of internal medicine. There is no such thing as a purely medical condition or a purely surgical disease, any disease which is the one is at any time liable to pass over into the realms of the other, therefore it is now more incumbent than ever that the specialist and general practitioner be broadly acquainted with the problems of each other. We can truthfully say that this book will prove an indispensable and invaluable guide upon a host of subjects to all who practice medicine.

The Spleen and Some of Its Diseases. By Sir Berkeley Moynihan, of Leeds, England. 129 Pages with 13 full page Diagrams. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5 net.

Until within very recent times the spleen has been a tabooed organ surgically. Occasionally it was removed when irreparably damaged by injury and sporadically for enlargements of one sort or another. During the past few years quite a surgery of this organ has developed and the spleen has been extirpated for splenomyelogenous leukemia, Banti's disease, hemolytic jaundice, pernicious anemia, cirrhosis of the liver, etc. Moyniham himself has played a prominent role in this development. Scarcely anybody alive has had a greater or more varied experience with the surgery of the spleen. Therefore anything from his pen must bear the weight of authority and be greedily absorbed as the last word upon the subject. As long ago as the middle of the last century it was clearly established by experience which was beyond cavil that the spleen was an organ not necessarily present in normal individuals, that its removal, when successful, did not seriously impair the chances of life and of good health, and that after its removal certain changes assumed to be of a compensatory character followed in due course. The way was then prepared for the deliberate removal of the spleen from man in conditions in which it was enlarged by disease. The first instance of such an operation is related by Quittenbaum, in 1826, who, after a series of experiments in which the spleen was successfully removed from cats and dogs, undertook the removal of the organ from a human being. The patient was a woman suffering from cirrhosis of the liver and ascites. She survived the operation only six hours. The first splenectomy deliberately performed in England for an enlargement of the organ was done by Spencer Wells. The patient was a woman, 34 years of age, who was evidently dying from a large spleen, and who had no other disease. The patient died of septicema 6½ days after the operation. There was not much advance in splenic surgery from Wells' time until the last few years when splenectomy came into use in the treatment of certain of the anemias associated with splenomegaly. According to Moyniham the work done at the Mayo Clinic along this line shows better than any other record the modern position of the operation of splenectomy.

SPLENECTOMIES FOR SPLENIC ANEMIA.

Total number of cases to September 20, 1920................	73
Total number of hospital deaths............................	9=12.3%

The results in spenic anemia, generally speaking, have been good, but the operation is more difficult than in other conditions, and the mortality is considerable.

SPLENECTOMIES FOR PERNICIOUS ANEMIA.

Total number of cases to September 20, 1920	53
Total number of hospital deaths	3=5.6%

In early cases at least the operation is justifiable.

SPLENECTOMIES FOR MYELOGENOUS LEUKEMIA.

Total number of cases to September 20, 1920	26
Total number of hospital deaths	1=3.8%

The results are poor in myelogenous leukemia, but five patients are in good condition and two in fair condition after periods of time beyond the life-expectancy of these cases. The patients are at least relieved of the weight of the spleen, and in two instances supposed to be early cases of myelogenous leukemia, not counted in this series, the patients have been cured, or at least they have lived a number of years following the operation. The operation is not difficult after radium treatment, and in selected cases should be further considered.

SPLENECTOMIES FOR HEMOLYTIC JAUNDICE.

Total number of cases to September 20, 1920	32
Total number of hospital deaths	1=3.1%

The results in hemolytic icterus have been excellent. Spenectomy is a real cure in a high percentage of cases.

SPLENECTOMIES FOR SEPTIC SPLENOMEGALIAS.

Total number of cases to September 20, 1920	10
Total number of hospital deaths	2=20%

Splenectomy is undoubtedly indicated in some of these cases:

Diagnosis.	*No. of Cases.*	*Hospital Deaths.*
Portal cirrhosis	9	4
Biliary cirrhosis	6	1
Lymphoma	3	0
Luetic splenomegalias	6	1
Lymphosarcoma	2	0
Gaucher's disease	4	1
Tuberculosis	4	0
Wandering spleen	2	0
Splenomegaly with eosinophilia	1	0
Splenomegaly with neutrophilia	1	1
Miscellaneous, questionable	11	2

Thus the number of cases is 243, with 26 hospital deaths.

Despite the great amount of experimental work done on the spleens of animals and the ever increasing observation upon the splenectomized man but little positive has been evolved concerning its functions or the part it plays in the human economy. Though it is an organ with great pathological potentialities, it appears to have no function of sufficient importance to be disturbed by its removal. W. J. Mayo claims that the function of the spleen is in direct relation with the liver, shown by the fact that whatever the function of the spleen may be, it is unable to complete the work that it initiates. Moyniham discusses in his peculiar style the possible functions of the spleen, but proves nothing definitely. Leaving us in the same position we have been in for some time past, that is its property of destroying deteriorated red cells, its sifting action upon microorganisms and its elaboration of hormones which act on organs at a distance, especially the bone-marrow.

This book brings such facts as are known concerning the functions, pathology, and treatment of distempers of the spleen together in a most agreeable, interesting and fascinating manner. It tells how such meagre truths as are known have been wrung by animal experimentation and clinical observation out of the maze of fantasies enshrouding this organ. The story is a remarkable one of perseverence and continued mass effort, and the conquests of the recent past are but an earnest of more rapid progress in the future. The spleen is ever claiming more and more attention of the medical profession. Those desirous of obtaining a just estimate of the part it is playing in the provocation and development of morbid processes within the body will find in this book of Moynihan's the information for which they are seeking. Surgeons and physicians alike will find it most helpful.

Pitfalls. By A. J. Caffrey, M. D., Instructor in Physiology at Milwaukee Medical College, from 1901 to 1910, Assistant Professor of Medicine at Marquette University School of Medicine, from 1913 to 1920. Boston: Richard G. Badger, 1921. Cloth, $2 net.

From the days of Hippocrates the mistakes in medicine have been more of omission than of commission. A diagnosis implies the expenditure of much effort in the solution of the nature of the disease at fault. Sometimes the evidence points directly to the disease and the diagnosis is made with somewhat less effort than in more obscure maladies, but a diagnosis to be of value must always be the result of a careful balancing of the history, physical and laboratory findings. In some cases the history is the most important link in the chain leading up to a diagnosis, at other times the exact malady can only be determined by the physical examination and on other occasions a solution of the problem can be made by the laboratory alone. Even after the exertion of the greatest care a mistaken diagnosis may be arrived at. Under such circumstances the error is not to be held against the doctor. He has used due care and foresight. But another class of mistakes is not to be condoned, viz., the snap-shot diagnosis. An opinion of this sort is an admission of ignorance pure and simple, a display of lack of knowledge. In Pitfalls many instances of mistakes of the latter type are recorded. To drive the lesson home with greater force Caffrey has made use of a series of stories as the exploiting medium. The experiences related therein are real. This gives the book greater pungency. Whilst the book is written in a popular vein, the style in no wise detracts from its usefulness. The mistakes enumerated may seem ludricrous, withal they are made every day by each and every one of us. Their airing cannot help but in the end be productive of much good. It is well worth the reading both by the profession and by the laity.

Manual of Operative Surgery. By John Fairbairn Binnie, A. M., C. M. (Aberdeen); F. A. C. S., Surgeon to the Christian Church, The Research and the General Hospital, Kansas City, Mo.; Fellow of the American Surgical Assciation; Member de Societe International de Chirurgie; Member of the Western Surgical Association. 8th Edition, revised and enlarged with 1628 illustrations, a number of which are printed in colors. Philadelphia. P. Blackiston's Son & Co., 1921.

The fact that this book has reached its 8th edition attests its popularity. It is popular because it differs from other text-books on operative surgery, inasmuch as emphasis is laid upon unused rather than upon the common operative procedures. While extensive requisitions have been made on the work of foreign authors. the book is to a large extent an epitome of the most modern methods of the leading American surgeons and as such will commend itself to American students and practitioners. The typography of the book is good and the illustrations excellent. We have no hesitation in recommending it as a standard work on operative surgery.

ITEMS.

Dr. Edjar Perkins, of the Rochambeau Apartments, Baltimore, Md., is a patient in the University Hospital.

Dr. M. M. Savage writes Dr. Charles Emil Brack from Vienna, Austria, under date of October 2, 1921: I have been in Vienna since August 15, 1921, once more leading an arduous student life and attending eye, ear, nose and throat courses and clinics offered to American physicians, the best that are given anywhere at present in Europe. In the antebellum days the medical men of America would divide their time between Berlin and Vienna. Unfortunately the Berlin Medical Faculty, and for that matter the faculties of the other great medical centers, either from the fact that they have not forgotten that through America they lost the war, or for other reasons, look upon the American doctor as a *persona non grata*, with the result that but few of our boys are now in Berlin. There are about fifty American physicians at present in Vienna, and we have our own A. M. A., of Vienna. Before the war the membership ran up to 300 at one time. Most of the men here attend the eye, ear, nose and throat clinics. Dr. J. G. O'Brein, class of 1916, is here attending otological clinics.

Dr. St. Clair Streett, class of 1880, is a resident of Kansas City, Missouri. He was born in Harford County, Md., and is a son of the late John Rush Streett. He went to Kansas City in 1882 since which time he has succeeded in reaching much prominence in his adopted city. During the World War he was a major in the Medical Corps whence he severed his connection in 1919. He is 62 years old.

Drs. Randolph Winslow, Alexius McGlannan, Harvey Stone, Isaac S. Stone, Lloyd Nolan and Nathan Winslow attended the 34th Annual Session of the Southern Gynecological Association held at Pinehurst, N. C., December 13, 14, 15, 1921. The president, Dr. Randolph Winslow, according to the usual custom, delivered the presidential address. He spoke on the Retrospect and Prospect of the Society. Dr. Nolan read a paper entitled "Contracture of the Psoas Parvus as an Explanation of Obscure Abdominal Pain in Certain Cases; Dr. McGlannan, Meckel's Diverticulum; Dr. Harvey Stone, Operation for Diaphragmatic Hernia, combined Abdominal and Thoracic Approach; Dr. Isaac S. Stone, Primary Carcinoma of the Female Bladder, and Dr. Nathan Winslow, by invitation, Aneurism of the Extra-Cranial Portion of the Internal Carotid Artery.

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CERVICAL RIBS.

By Joseph W. Holland, M. D., F. A. C. S.

Practically all Mammalia have seven cervical vertebrae. There are a few known exceptions, e. g.: one variety of sloth has but six while another variety has nine. It may be mentioned that the latter variety has ribs attached to the ninth cervical vertebra and frequently also to the eighth.

The manatee has only six cervical vertebrae. In certain species of the whale the cervical vertebrae are fused but bear separate transverse processes. The giraffe has but seven vertebrae in the neck. The Chameleon has ribs attached to the two lower cervical vertebrae. Crocodiles also have cervical ribs. Snakes have ribs attached to all vertebrae except those in the tail. The greatest number of cervical vertebrae is found in birds, e. g.: the sparrow has 9 and the swan 23.

The gorilla and chimpanzee have 13 pairs of ribs. The theory of a certain school of atavists that the orang utang (the man of the woods) is an ancestor of man finds favor in the fact that this animal has 12 pairs.

In Mammalia the number of ribs varies from 9 pairs in a species of whale to 24 pairs in the two toed sloth.

Supernumerary ribs in the cervical region in man are rather common, Accurate knowledge of their occurrence dates back to antiquity. They were made mention of by Galen. The first operation for relief of symptoms was performed in 1861 by Coote. Murphy, in his collection from the literature upon the subject, estimated the incidence of cervical ribs at .03% and that from 5% to 10% cause symptoms.

Fischel, of Prague, in examining a large number of cadavers found what he considered some sort of cervical rib in 1% of all cases. This, however, seems entirely too high an estimate. Slight elongation of the transverse process of the 7th cervical vertebrae is very common, but only a small proportion of these should be regarded as abnormal.

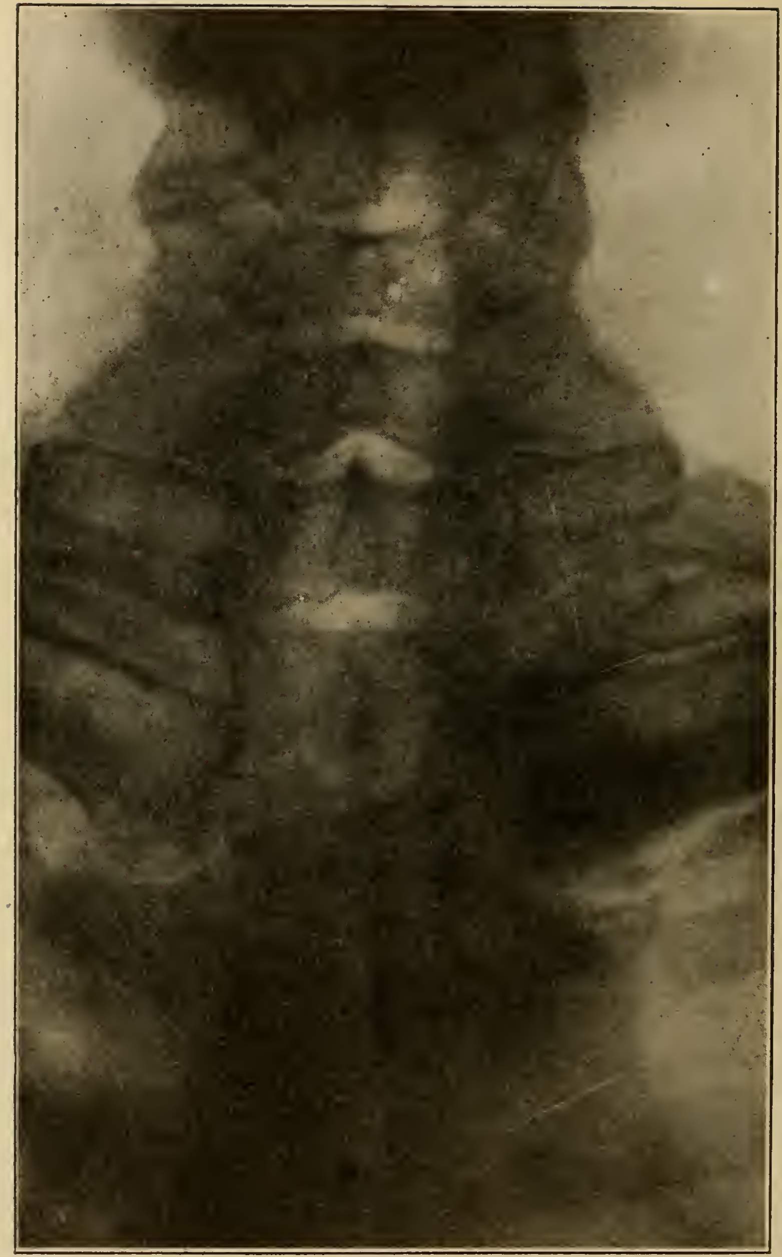

Figure I.

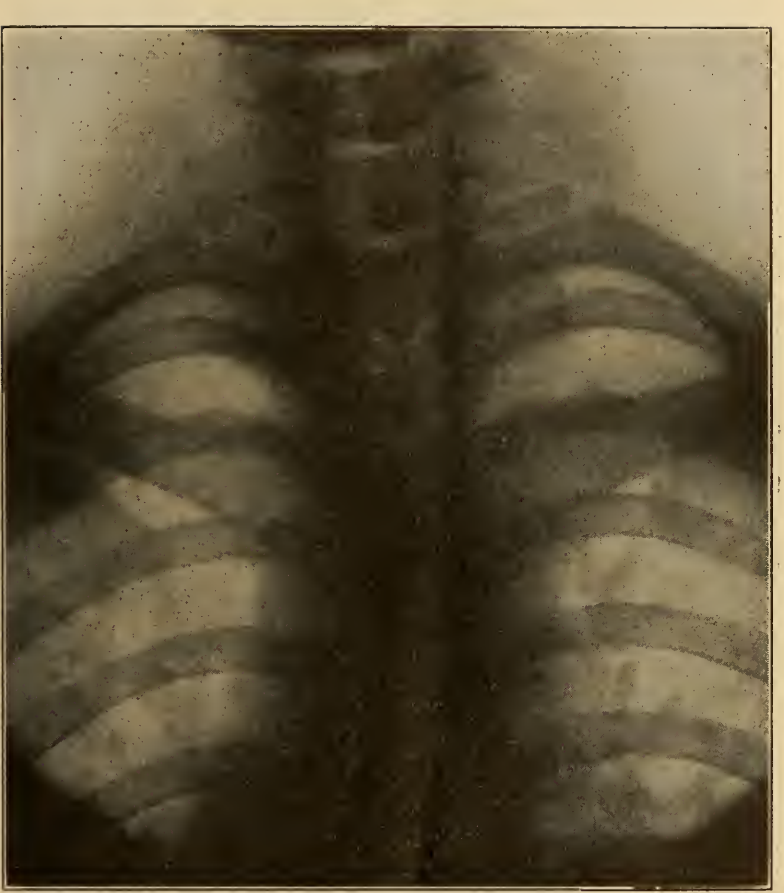

Figure II.

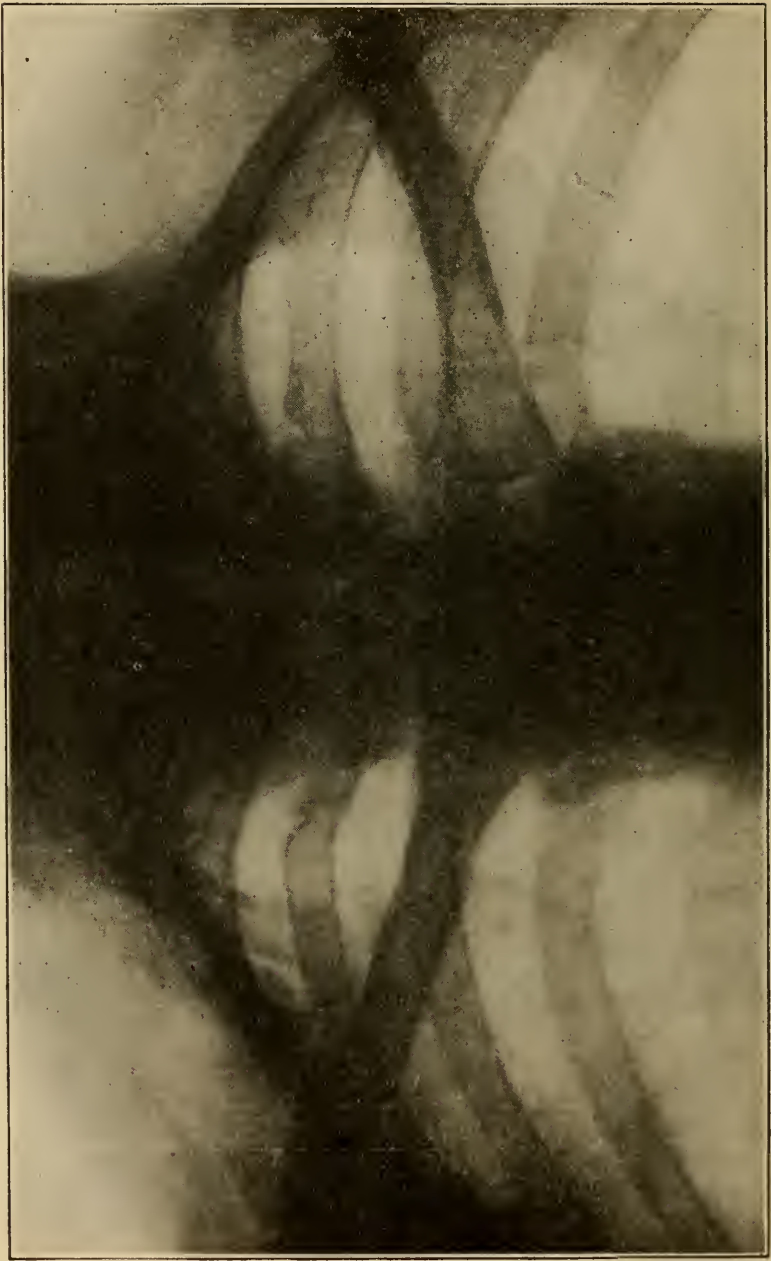

Figure III.

Pilling in 1894 could find but 139 cases reported. Radiography has added greatly to our knowledge concerning the subject and has proven that many well developed cervical ribs cause no trouble while on the other hand serious crippling may be caused by small or rudimentary ribs.

DEVELOPMENT.

In man cervical ribs are due to variation in the development of the vertebrae. The transverse processes of the 6th and 7th and sometimes the 5th cervical vertebra contain a separate center of ossification from which the ventral portion of the process is developed. This is known as the costal element and is analagous to the ribs in the thoracic region of the vertebral column. The over development of this element varies from what amounts to an elongation of the process (Figure I), to a more or less complete rib (Figure III). The transverse processes of the 7th are always more prominent than those of the other cervical vertebrae. They have normally smaller foramina and in case they bear supernumerary ribs, usually have no formina at all. Cervical ribs may articulate with the body and transverse process or be fused with the vertebra. They very rarely articulate with the sternum, the ventral end being either free or fused with the first throacic rib or its cartilage (Figure III). The rib may be bifid at its distal extremity. This condition was found in Case II. They are seldom symmetrical when well developed, though cases of bilateral complete ribs have been reported. Perrera[1] reported a case of bilateral complete cervical ribs in which the artery and brachial plexus passed over the rib on the left side and under the rib on the right side.

Cervical ribs occur bilaterally, according to Pilling and Tilghman, in 67% of cases while Miller[2] found them to be bilateral in 80%. Symptoms, however, are nearly always unilateral, and according to Streissler are more common on the left side. Symptoms of cervical ribs occur more frequently in women than men; Streissler 70.8% to 29.2%; Church 60% to 70% in women; Keen 75.6%.

AGE INCIDENCE.

The age at which symptoms appear is most commonly between puberty and 30. According to Streissler's[3] table the incidence is as follows, based upon a study of 143 cases:

0-10	7.7%
11-20	32.2
21-30	30.0
31-40	13.3
41-50	11.2
51-60	4.2
61-70	.07
Over 70	.07

Etiology.

Symptoms generally first appear after a trauma such as falling upon shoulder, severe blow upon the side of the neck or shoulder or as a result of lifting heavy weight, cranking automobile, carrying weight upon the shoulder, etc. Posture is no doubt responsible in some cases. The first symptoms are always sensory. These may appear immediately following an injury or may not develop for several months after the trauma, as in Case II.

Todd[4] produced a nerve syndrome upon himself similar to pressure from ribs by sleeping with his arms extended vertically above his head. Church[5] admonishes that every case presenting sensory nerve disturbance of the upper extremity with trophic changes with or without vascular changes should be examined for cervical ribs. The variations in the syndrome are not always in accord with the variations in the size of the ribs. The three cases herein reported illustrate fairly accurately the symptoms in the stages which might develop in a single long standing case. In grading the development of the cervical rib syndrome it is better to bear in mind the symptoms rather than attempt to type the case according to the shape or size of the rib. Small rudimentary growths may cause serious symptoms while more or less well developed ribs may be attended by but slight disturbance. The changes in the nerves and vessels being due to pressure, the relation of the supernumerary rib to these structures and not the size of the rib is the determining factor in producing nervous or vascular lesions.

Local Symptoms—Broadening of the base of the neck, tumor, due to the rib or an aneurism distal to the stricture in the artery, pain on pressure over cervical nerves, pulsation, in some cases bruit in subclavian artery. Halstead[6] reviewed 716 cases and found aneurism or some degree of dilatation of the subclavian artery in 27. Experimentally he always found the dilatation distal to the point of constriction. He also noted that no dilatation occurred in complete closure of the vessel nor did he find any enlargement in vessels with only slight stricture.

Nervous Symptoms—These vary from tingling in the fingers to marked anaesthesia and paraesthesias accompanied by severe pain and motor disturbance varying from muscular weakness to palsy and general muscular atrophy. Pain in the side of the head about the external ear is commonly complained of. Glazing of the skin and brittleness of the nails occur in advanced cases.

Vascular symptoms are not nearly so frequent. The subclavian vein is very seldom involved. A few cases of moist gangrene, due to blocking of the return circulation have been recorded. In cases where the arterial circulation is interferred with the subclavian is usually placed high in the neck and pulsation in this vessel can be distinctly observed. In case the artery is constricted a well marked ischaemia develops in the whole upper extremity. The skin is cold and pallid. In complete constriction or thombosis of the vessel the entire extremity is pulseless, as in Case III.

Muscular Symptoms—These include rapid fatigue, varying degrees of weakness and atrophy. The degree of atrophy depends upon the severity of the nerve lesions.

Differential Diagnosis—Among other conditions which may produce symptoms similar to those caused by cervical ribs may be mentioned fractured first thoracic rib with excessive callus formation, tumor in subclavian triangle, enlarged lymph nodes, cervical scoliosis with compression of cervical nerves, apical tuberculosis, subclavian aneurism and enlarged thyroid gland.

TREATMENT.

The treatment is almost entirely surgical. Medical, electrical and hygienic treatment is only useful in cases where the deformity is associated with tuberculosis, syphilis or other concurrent disease. The surgical treatment may be divided into mechanical and operative. Many patients suffering from rudimentary ribs find that by elevating the arm or shoulder the pain from nerve pressure can be lessened or relieved. Others develop a lateral curvature from habitual abduction of the neck. Mild cases and early cases may be relieved by appliances which relieve the nerve pressure and immobilizes the cervical spine. The treatment described in Case I is both simple and effective. All cases, however, without taking into consideration the size or shape of the supernumerary rib, which prove by their history to be progressive should be operated on and the entire rib resected.

OPERATION.

The rib can be approached from behind or through a ventral incision. The ventral approach is preferable because it renders the parts involved more accessible and makes it possible to always remove the entire rib. The skin incision should be ample. An incision parallel to the clavicle, extending from over the lateral border of the trapezius muscle to near the midline of the neck in front, if necessary to gain the exposure desired, is the one of choice. The resulting scar is less conspicuous than when a vertical skin incision is used. After dissecting the skin and fascia well upward a vertical incision is made through the subcutaneous tissues parallel to the lateral border of the sterno mastoid muscle and the rib and nerve trunks exposed. In Case III a second incision along the medial border of the sterno mastoid muscle aided greatly in removing the ventral extremity of the rib. All superficial nerves should be carefully protected from injury. The suprascapular nerve and transverse cervicis vessels are particularly in the way. This nerve supplies most of the dorsal scapular muscles and if severed causes a certain amount of impairment of the shoulder movements. The nerve trunks should be retracted ventrally and medially until the dorsal attachment of the rib can be reached. All muscle and fibrous tissue attached to the rib should be separated. The periosteum should be left intact to be removed with the rib in order to prevent bony reformation. The entire rib should then be rongeured away. In spite of the most careful handling of the nerves more or less traumatic neuritis may follow the operation, but unless the function of the nerves has already been destroyed by the pressure upon the rib, perfect function will in time be restored. Opening the apex of the pleural cavity is an accident which should be carefully avoided.

Nothing can be done as a rule to restore the circulation in the subclavian vessels in case the walls have been damaged by pressure. In case of complete occlusion by stricture or thrombosis of the artery the collateral circulation is usually adequate to preserve the vitality of the arm. See Case III. Complete obstruction of the subclavian vein is fortunately very rare, but in the few cases of this kind reported gangrene of some part of the upper extremity has resulted.

The case records of the three cases here appended demonstrate fairly well three types of syndromes and the results which may be expected from treatment.

Case I. S. W., widow, aged 33. Entered hospital July 3rd, 1919, complaining of pain in left side of her neck and head and upper extremities. Husband died three years ago. Has no children. Family history negative. Has always enjoyed good health. Was married at eighteen; one miscarriage of three months. She was operated on for appendicitis 1905. In 1906 both tubes and ovaries were removed. Suffered rheumatism six years ago. Hemorrhoidectomy eighteen months ago. Four years ago she was thrown from a wagon, and suffered injury to left side of neck, left shoulder and left hip. Since the accident, has suffered pain continuously in left shoulder, left side of neck and face, and a numb sensation in both upper extremities. Pain is worse at night. The patient suffers a great deal from nervousness and seems depressed and apprehensive about her condition.

Examination on Entrance.—Well developed, muscular woman, healthy in appearance. Teeth are suggestive of alveolar disease. There is a slight discharge from the left ear. There is a slight hyperasthesia in left side of neck and in both upper extremities. No muscular atrophy or weakness. Joints normal. Movements of spine normal in all directions. Left sternoclavicular joint noticeably enlarged. Patient claims that this joint was injured at the time of accident four years ago. Blood pressure: left, 102-70; right, 105-70. Examination of left ear by Dr. Tarun demonstrates eczema of external auditory canal. Drum head normal. X-ray examination of neck shows bilateral rudimentary cervical rib. See Figure I.

Impression.—Sensory disturbance of the upper extremities, neck and head due to nerve irritation, probably from the cervical ribs.

The patient was treated for ten days in the hospital with extension applied to the head with the body in dorsal decubitus on an inclined plane. On returning to her home, she was supplied with the apparatus for a continuance of the same treatment, with advice to sleep on an unyielding bed with the extension apparatus in operation.

The patient reported several months after discharge from the hospital that the pain in her upper extremities and neck had very much diminished. In a later communication she stated that she was suffering no trouble with her spine or upper extremities.

Case II. N. D., white female, single, aged 24. This young woman was raised on a farm and was use to active outdoor life, frequently engaging in the labor of a field hand.

Entered University Hospital April 14, 1920, suffering pain in right upper extremity and right side of head and neck, muscular weakness in forearm and shoulder and local sensory disturbances in upper extremity. Parents living and in good health. Four brothers living. Two sisters and one brother died in infancy. At the age of 16., patient was thrown from a buggy, injuring the right shoulder. Injury caused a disability of two months. Several months after the accident, the weakness in right upper extremity was noticed, especially in muscles of forearm. The extremity became easily fatigued and ached. The symptoms became continuous, but apparently did not become more marked until 1918, when she suffered an attack of influenza following which the pain and muscular weakness in right upper extremity steadily increased. Pain in right side of neck and right side of head also increased and became constant with frequent exacerbations which prevented rest and affected her nervous system. During this period she noticed changes in her vision and discomfort in both eyes. On entering the hospital the pain in side of head, especially about the external ear extending down the neck throughout the entire upper extremity, was sufficiently severe to cause loss of sleep and seriously affect the general tone of the patient. Pain is constant but is subject to exacerbations, especially in the head and neck and shoulder.

Physical Examination.—Patient is well developed, short of stature and except a slight pallor, tolerably healthy in appearance. Examination of chest negative. Abdomen negative. There is a slight asymmetry in the neck, right side being apparently fuller than the left. There is a slight depression over the supra spinus and infraspinous fossae. Deltoids symmetrical. No atrophy of the muscles of arm and forearm. Marked muscular weakness throughout the entire extremity, including both flexors and extensors. Movements of extremity cause pain and sense of fatigue. Spine negative. There is an area of tenderness over the right posterior triangle of the neck, especially marked at the ventral edge of the trapezius muscle. At this point a hard mass can be felt on deep pressure. Mass is immovable. Left upper extremity normal. No symptoms of motor or sensory disturbance. Neurological examination by Dr. George M. Settle. "Examination reveals general weakness in the flexors and extensors of right hand, forearm and arm. There is also weakness in abduction and adduction. There is a slight atrophy of right supra spinatus muscle and some flatness of right pectorals and right triceps. Reflexes are normal on both sides. Sensation is normal in right upper extremity, except on dorsal and palmar surfaces of the hand and on flexor surface of forearm, in which areas there is hyperesthesia. Pain, temperature and muscle sense normal."

Examination of urine and blood negative. Diagnosis: Irritative brachial neuritis, caused by cervical rib. See Figure II.

Operation, April 16, 1920. A transverse incision was made parallel with the clavicle extending from the dorsal edge of the sternocleidomastoid to 2 inches beyond the ventral border of the trapezius muscle. Skin and platysma were dissected upward. A vertical incision was then made along the ventral margin of the trapezius for about 3 inches. This incision was found to be immediately over the cervical rib. The brachial nerves and subclavian artery were gently retracted medially. Bands of muscle were found to be attached to the rib, which was fixed to the transverse process of the 7th cervical vertebra. The rib extended about 1 inch beyond the tip of the transverse process, which was somewhat longer than usual. The lateral extremity of the rib was bifurcated and its superior surface contained a shallow groove. The middle trunk of the brachial plexus was found lying in the groove and passed through the notch at the end of the rib. After carefully freeing muscular attachments, the nerve trunk could be lifted out of the notch and groove. The liberation of the nerve, however, required considerable effort, which probably produced undue stretching of the nerve fibres. After liberation of the nerve the rudimentary rib and part of the transverse process were rongeured away. The removal of the rib, it was found, freed the nerve trunk from pressure and allowed it to drop into its normal position. A cigarette drain was introduced into the wound to the stump of the transverse process and the wound closed. The right upper extremity was immobilized over the chest with the right hand on left shoulder and the arm in extreme adduction. The pleural cavity was not opened. The greatest difficulty encountered was in avoiding the supra scapula nerve. Subsequent symptoms indicated injury to this nerve.

Following the operation, the patient complained of numbness in the right hand. There was slight anaesthesia throughout the entire upper extremity. The wound healed per primam, but a brachial neuritis developed in a few days, evidently traumatic in origin, as a result of the handling of the nerves at the operation. There was also some atrophy of the posterior scapular muscles. The patient was referred to Dr. Settle for treatment of the neuritis which completely cleared up after several months treatment. Examination in February, 1921, showed complete recovery of muscle strength. Patient suffers no sensory disturbances, except occasionally in damp weather when she has a slight aching in the side of her head. Posterior scapula muscles have apparently entirely recovered. Nerve and muscular condition of upper extremity pronounced by Dr. Settle at this time to be normal. X-ray examination of stump of cervical rib and transverse process March 4, 1921, shows no regeneration of the bone.

Case III. L. E., white female, aged 48, widow. Entered hospital November 5, 1918, complaining of paroxysms of pain in right upper extremity with marked weakness and atrophy of the muscles. Patient is a frail, delicate looking woman, apparently older than her real age. There is no history of any disease or injury which might account for the condition of her right upper extremity. She had noticed weakness and atrophy of the muscles and pain in the right forearm and hand for several years, which she attributed to rheumatism and nerve trouble. Frequently the pain was so severe as to require morphine for relief. Examination of right upper extremity shows muscular weakness and atrophy but no loss of mobility of the joints. Movements cause pain, especially about the shoulder. There is evidence of trophic disturbance of the skin which appears very pale, thin and shiny. All the muscles of the extremity are greatly atrophied, especially those of the hand. There is marked diminution of the tactile sense, but hyperasthesia to heat and cold. No pulsation can be detected anywhere in the extremity. The axillary artery can be palpated and feels like a fibrous cord about the size of a small lead pencil. There is no pulsation. The skin feels cold. Patient can barely flex the elbow. Hand grip extremely feeble. A hard mass can be distinctly felt in the region of the 7th transverse process in both sides of neck. See Figure III.

Impression.—Bilateral cervical ribs, thrombosis right axillary artery, right brachial neuritis, muscular atrophy of right upper extremity.

Operation, November 7, 1918. Transverse incision made 2 inches above and parallel to the right clavicle. Skin dissected upward and downward, making a wide opening. Vertical incisions through the platysma and fascia, both lateral and medial to the sterno-mastoid muscle were then made. This made approach to the cervical rib comparatively easy. Great caution was used in handling the brachial nerves to prevent trauma. The rib was found to be articulated with the 7th cervical vertebra dorsally, and extended to the costal cartilage of the first rib with which it was fused. It was found necessary to expose the entire rib. The pressure upon the subclavian artery and brachial nerves which lay on top was caused by the ventral extremity of the rib. The entire rib was removed with a rib cutter and rongeur forceps. The wound was closed and a cigarette drain introduced as far as the stump of the rib. The pleural cavity was not opened although the pleura was found attached to the cervical rib. The right arm was fixed to the chest in adduction. Wound healed per primam. Patient made an uneventful operative recovery. She was discharged from the hospital November 21, 1918. She suffered no paroxysms of acute pain after the operation. Except for a transient aggravation of the weakness of the muscles of the upper extremity, no trouble resulted from the operation. On leaving the hospital there was a noticeable increase in the strength of the muscles and less sense of coldness.

January 10, 1919, her family physician, Dr. O. Fisher, of Rockingham, Virginia, reported that the arm was still improving and that she had good sensation in the fingers and no pain, except when the hand was exposed to cold. That the muscles were filling out and gaining strength continuously. Patient could at that time pick up a pin. Color of skin had returned to normal. Finger nails appeared normal. There was no pulsation in radial artery.

In a letter from the patient in November, 1919, she stated that she could move her arm in all directions, and that her little finger felt "numb" but could be moved. Muscular strength had improved greatly but the arm "tired easily."

In a letter from the patient March 15, 1921, she stated that the letter was written with the right hand. She stated that she was able to do ordinary housework with the right hand, such as peel apples and sew. In fact her right hand was as strong as the left, and that her two hands were the same size and the same color.

The only difference in the two hands which she noticed was that the right was more sensitive to cold and there was still some "numbness" in ring and little fingers. She had been free from pain since the operation., She said that she thought the right shoulder was a little lower than the left shoulder but was the same size.

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NEPHROLITHIASIS.

By W. Houston Toulson, M. D.

In analyzing the cases of kidney stones that have been admitted to the University Hospital during the last five years, certain interesting observations are noticed that may be worth recounting.

Out of a total of 22,000 cases admitted, fifty, or .2%, were diagnosed nephrolithiasis. Of these fifty cases, sixteen were bilateral; 46% showed stone in the right kidney, while 40% had stones in the left kidney. Five of the fifty cases showed multiple stone formation.

In this connection, it is interesting to compare these statistics with those of Braash, who reports sixty-two cases of bilateral stones in a series of five hundred and sixty-six operations for calculus of the kidney; and those of Israel, who reports sixty-four cases in five hundred and seventy-two operations.

All, of our cases, but one, had stones of inorganic origin; they were composed of urates, phosphates and oxalates and varied in size from that of a small pea to one four cm. in length, the larger size stones, without exception, were found in the pelvis of the kidney rather than in the cortex. The one exception mentioned was a case of bilateral multiple nephrolithiasis, in which the stones were composed of cystin, these stones were about the size of a large walnut and had a yellowish, translucent appearence. While stones of organic origin are rare, cystin stones have been found to be the most common of the rare forms.

Of this series, 64% were white males and 36% white females; which about coincides with other statistics. In spite of the fact that there are two wards for colored people at the hospital and the fact that a large proportion of the patients in the dispensary of the hospital are colored, not one case of renal lithiasis has been operated or diagnosed in the hospital.

The ages of the cases in this series range from 18 to 59 years; the average being 38 years. This fact is also noted by Ransohoff, who states that the disease is one of the third decade of life.

The symptoms are noteworthy and vary considerably with the location, size, shape and duration of the stone. In practically all of these cases pain was the outstanding symptom. The pain was most interesting and occurred commonly as a definite paroxysm and was attended by chills, fevers, and sweats. The pain usually began in the region of the kidney and radiated chiefly along the course of the urinary tract on the affected side, it was strikingly present at the end of the urethra. Some of these patients, however, complained of pain in the lower abdomen, which was more pronounced than the pain in the kidney region, so that, in many instances mistaken diagnoses resulted. The most common source of error was the diagnosis of appendicitis; three cases of the present series were operated on previously for appendicitis. Braash reports one case in his series, that complained of gastric symptoms and was operated on for duodenal ulcer, while several writers have reported salpingitis, oophoritis and adhesions as mistaken diagnoses.

In most of these cases, 60%, there was pain associated with typical colicky attacks, yet there were two instances where the patients were devoid of pain, their presenting symptom being frequency of urination. In one instance pain in the kidney region was felt only on moving, the patient being perfectly comfortable when quiet. Another patient had marked suprapubic pain as the only symptom. In three cases the pain was referred to the opposite side, this condition is described as the "reno-renal" reflex, these particular cases emphasizes the importance of examining the entire urinary tract, where stone is suspected; for, if we limit the observations to the suspected, or symptom side, we may overlook the causative factor in the other side.

Tenderness could usually be elicited by bi-manual palpation over the affected kidney; the more acute the symptoms, the more exquisite was the soreness. One of the cases of bilateral nephrolithiasis complained of severe backache and was very tender across the loins, here the urinary changes lead to the diagnosis.

Frequency of urination was the most common of all the symptoms, this was manifested in all the cases at some period during the disease. Nycturia was present in all but one case: diurnal frequency was noticed in all. The frequency was more marked at the time of the attacks of kidney colic, dysuria was also noted in a rather high percentage of the cases. Blood, either macroscopic or microscopic, appeared in all the cases, albumin was found in the urine in 70% of the cases, and pus cells could be demonstrated in 60%.

In only one case was there urethral discharge and this was intermittent, the discharge showed microscopically a mixed and diffuse flora of bacteria.

Practically all of the observed cases had fever ranging from 99° to 100° F. This fever occurred in the evening and subsided in the morning to normal, it seemed to bear no relation to the appearance of pus in the urine, for, in several instances with constant evening elevations of temperature, the repeated urinalyses showed no pus cells.

Of all the subjective symptoms, pain is the most important aid to diagnosis, this characteristic symptom, especially when attended by disturbed urinary function, should lead to a suspicion of stone in the kidney.

The X-ray will usually aid materially in the diagnosis, but even this agent is fallible, for at least three per cent of stones fail to show in the radiograph, uric acid stones are particularly hard to reveal in the shadow, again, there is often a confusion between phleboliths and regional calcareous glands. It is most important that patients to be radiographed be properly prepared i. e., the intestines should be as free from gas as possible.

Cystoscopy is necessary to establish the presence or absence of stone in the bladder. Ureteral catheterization will give an indication of the condition of the urine from the kidneys, and, with the help of the shadow-throwing catheter, prevent confusion between the diagnosis of renal calculi and phleboliths and calcareous glands. The ureteral catheterization with the functional tests will give an indication of the condition of the kidneys, which is most necessary in case of operation. Pyelography sheds much light on the location of the stone in the kidney and frequently points out to the surgeon whether the stone can be reached through the pelvis of the kidney or whether it be lodged in the cortex, when nephrotomy must be done.

In some of these cases there was increased phthalein output on the damaged side, this may be explained by increased vascularity, which may be due, either to infection or irritation, or both, caused by the offending stone. Occasionally no diminution of phthalein output was seen, even where the kidney substance had been materially destroyed. This observation has been described in many other diseases of the kidney.

The retained nitrogen in the blood, which, by some authorities is regarded as the best index to the kidney function, was not done in all cases, because the first of these cases were admitted four or five years ago when the use of the blood chemistry was not so common, in those cases the phthalein test was compared with the amount of urea in the urine. Recently, however, the blood nitrogen has been checked up with the phthalein test and in most instances the blood nitrogen was found to be normal.

The leucocytosis varied with the fever, it ranged from 10,000 to 22,000, averaging about 14,000; the polymorphonuclear cells predominating in the differential count.

SUMMARY.

A careful history is essential in these cases, for example, a diurnal frequency of urination may be physiologic, but, when combined with a nocturnal frequency ordinarily points to some pathologic process of the urogenital tract.

The character of the pain is in itself often diagnostic, particularly in its relation to the function of micturition.

The appearance of blood in the urine is of extreme importance and should never be neglected, whether bright in color or mixed with urine and whether it occur before, during or after urination, should be noted.

Since the introduction of the alkaline halogen solutions pyelography has been made a much safer and less painful procedure.

In every case of pyelotomy retrograde catheterization of the ureter should be done to ascertain the presence or absence of any offending substance.

Stereoscopic views should be had of small stones in the kidney, difficult of localization.

In spite of precautions, about 10% of these cases recur. Cabot has advised, as a preventive, the examination of the urine for concentration of inorganic salts; for concentrations of urates the administration of lithium or potash salts is recommended, for, oxalates, he would prohibit the use of fruits containing vegetable acids, and for phosphates, he gives nitro-hydrochloric acid.

After operation it would seem advisable to turn these cases over to the internist for metabolistic studies.

REPORT OF SOME CASES OF INFECTION OF THE NASAL ACCESSORY SINUSES PRESENTING UNUSUAL SYMPTOMS.

EDWARD A. LOOPER, M. D.

Many cases of disease of the nasal accessary sinuses present a well defined group of clinical symptoms which make the diagnosis and treatment comparatively easy. It is the borderline cases which give us most concern. The cases in which the nasal symptoms are insignificant or are masked by certain general symptoms of toxic absorption so that the attention is directed along other lines. This is especially true of cases which produce arthritis and indefinite rheumatic pains, digestive disturbances, malaise, headache and vertigo.

Considering the anatomical structure and close relationship of the sinuses to other important structures, it is not uncommon that the most prominent symptoms come from these special organs. The most typical example is found in eye lesions, cranial involvement and reflex nervous phenomena.

The following cases represent a few illustrations of types in which the nasal symptoms were somewhat obscured by more pronounced symptoms of involvement in other structures.

Mrs. J. G., age 35, was sent to me for examination as to the cause of extreme vertigo, which was especially severe when lying down and on turning to the right side. Associated with the vertigo was constant frontal headache, greater over the right eye, but was more or less disseminated over the right side of the head. The patient gave a history of having similar attacks, but milder in form for intermittent periods during the past fifteen years. Two months before she was sent to me the exacerbations had become so constant and severe that she was almost a nervous wreck, in fact she presented a typical picture of neurasthenia. She could not sleep, was very apprehensive and there was a peculiar feeling of weight and pulling sensation in the right side of her head. Pain was present in the occipital region and at a point in her left shoulder. Her skin was sallow, appetite was lost and she was totally incapacitated.

Nasal examination showed slight tenderness under right frontal sinus. There was a high posterior deviation of the septum to the right. Breathing space was limited on this side. Constant postnasal discharge. Transillumination showed clouding of right frontal sinus, which was confirmed by X-ray examination.

On October 10, 1919, a conservative operation was performed. The deviated septum was corrected and the anterior part of middle turbinate resected. For about two weeks there was decided improvement. The attacks of vertigo became less frequent and the pain subsided. There was a profuse nasal discharge. Gradually the symptoms became worse until she was suffering about as much as ever, so it was decided that more drainage was necessary.

At the second operation a more complete intranasal operation was performed. The ethmoid cells were curetted and the nasofrontal duct enlarged. As before, there was a period of temporary improvement, but eventually there was a recurrence of the most prominent symptoms; so that the patient was getting very much discouraged and depressed.

By this time it seemed to me that a radical operation would be necessary if any form of permanent relief was to be obtained.

On June 12, 1921, a radical operation was performed. When the anterior wall of the frontal sinus was opened a great quantity of creamy pus poured out. There was also a collection of granulation tissue on the floor of the sinus, showing the result of a long standing infection.

She recovered from the operation without complications and the cosmetic result was surprisingly good. All vertigo and headache rapidly disappeared and her nervous condition began to clear up. In a short time all symptoms had entirely disappeared and she was sent home.

About one month ago she reported to my office and told me that she was feeling fine, had gained several pounds in weight, skin was clear and she did not suffer with either vertigo or headache. She is now working every day without difficulty.

A man 37 years of age was sent to Baltimore from North Carolina with a diagnosis of suspected brain tumor. He was suffering with intense frontal headaches, limited to the left side and extending to the occipital region. He had a great deal of vertigo and nausea. When his pain and headaches were most severe, there was a spasmodic twitching of the left arm, simulating attacks of Jacksonian epilepsy. He had photophobia and eyes would tire easily after reading. There was a history of repeated colds and obstruction to breathing on the left side. A general and special examination for intracranial new growths proved to be negative.

Examination of the nose revealed tenderness under the floor of left frontal sinus. The septum was deviated to the left. No nasal discharge. The left middle turbinate was very much hypertrophied. By transillumination, the left frontal sinus appeared darker than the right. X-ray showed a small left frontal sinus which was cloudy.

At the time of operation the deviated septum was corrected, hypertrophied middle turbinate was resected, ethmoidal cells curetted and nasal-frontal duct enlarged.

After a week, symptoms began to improve, all vertigo and nausea disappeared. Headache and pains soon cleared up and patient was sent home free of all symptoms.

Mrs. J. C. L., age 34. September 23, 1919. Three years ago present trouble started with severe pain in and over left eye, radiating to temple, back of head and neck. The pain was exaggerated by exertion, especially on climbing stairs, stooping over or any jarring motion. Headaches were practically constant, and at menstrual period became intense and unbearable, so that morphia was necessary for relief in each instance. After about four months she developed severe pains in left hip and shoulder, more severe in the morning, lost weight, appetite was poor, skin sallow and she was extremely nervous.

During the past few years her symptoms were so distressing that she consulted a number of doctors for relief and during the course of their treatment eight surgical operations had been performed. Her appendix had been removed. Gall bladder drained. An operation for hemorrhoids. A dilatation and curretage. Her eyes were examined a number of times, but no nasal condition had been suspected.

With all of the above operations, no relief had been obtained. Her headaches, prostration and general condition became worse.

On September 1, 1919, patient was referred to me for examination of her sinuses as a possible cause of the trouble. At the time of the examination she was suffering intense pain in the left eye and left side of face, extending to back of head and neck. She complained of constant postnasal discharge and obstruction to breathing on the left side. At this time her physical condition was very bad, skin sallow, no appetite, was weak and easily prostrated. She was very nervous and could not sleep well. The pain was so excruciating that morphia was generally required to obtain relief. Vertigo was a constant symptom and any nasal treatment was followed by nausea.

Examination showed slight tenderness under left frontal sinus. No clouding made out by transillumination. There was a high posterior deviation of septum to the left with limitation of breathing space on this side. Sense of smell obtunded. Profuse nasal discharge, a small amount in middle meatus.

X-ray examination showed clouding of left sphenoids and ethemoids. For a time local astringent applications and adrenalin tampons afforded so much relief that I was convinced that an operation would improve the condition.

The first operation was a conservative one under local anesthesia. For about a week she showed signs of improvement, but at the end of this time her old symptoms recurred so that she was suffering about as much as ever. At the second operation, under general anesthesia, the deviation of the septum was corrected, the ethmoid cells completely exenterated and sphenoids drained. Following this operation there was gradual improvement, and at the end of three weeks all headaches and disagreeable symptoms had disappeared.

Since the operation I have had several letters from her expressing appreciation for being "made over" as she expressed it, and telling me that she has had no headaches, has gained several pounds in weight, skin is clear and she feels fine.

This pátient could have been saved much suffering and needless expense if a careful investigation of the sinuses had been made earlier.

Dr. E. H. P., age 42, was referred for examination of the sinuses as a possible cause of the following toxic symptoms:

For one year the patient had been unable to pursue his usual avocation, dentistry. Much of the time he had been in bed. His skin was sallow, appetite was lost. He had serious digestive disturbances, one interesting feature of which was obstinate constipation and a heavy grinding sensation which would appear very late every afternoon. He had no energy, was extremely nervous and irritable and it was difficult for him to sleep.

Nasal examination showed a profuse nasal discharge of foul odor which was most marked on the right side. There was an infection of both antra and the ethmoids. The ethmoids and antra were curetted and drained, after which there was gradual improvement.

Today the patient is perfectly well. His color is good, appetite fine and all digestive disturbances have disappeared. He does hard work every day without difficulty and has had no recurrence of his symptoms.

E. G., age 25, consulted me on September 9, 1920, for sudden loss of vision in the left eye which had developed about a week previous to this visit. He had suffered no pain, gave no history of nasal infection or discharge. His complaint was, that he arose one morning and found his vision very much blurred in the left eye, which continued to get worse until he could not see his hand. Associated with this was marked vertigo and slight nausea.

At the time of my examination his left pupil was about 1 mm. larger than the right. Muscular movements were normal in all directions. Vision was limited, for he could make out only the tips of my fingers at one foot. Visual field, as shown on chart, was concentrically contracted to ten degrees. He could not distinguish colors. Ophthalmoscopic examination showed slight hyperaemia and faint blurring of the edges of the optic disc. Fundus otherwise negative.

The extraocular structures of the right eye were negative. Pupillary reactions good. Ocular movements normal. Vision 20/20. No pathological changes made out in fundus. Visual field normal.

Nasal examination showed marked clouding of left antrum by transillumination and confirmed by X-ray examination. There was no tenderness over the sinuses. No nasal discharge. Breathing space unobstructed. In fact, if transillumination and X-ray had not been used, there would have been no findings to indicate sinus involvement.

On September 11, 1920, the left antrum was drained and a small quantity of sero-purulent discharge evacuated. The following morning when I visited him in the hospital, to my surprise he exclaimed, "I can see perfectly well," and on testing his vision I found that he could read fine newspaper print without difficulty. He did not complain of headache or vertigo, and felt fine.

The next day on taking his visual field I found it had improved about 15°, and in five days had returned to normal with normal vision. The hyperaemia of the optic disc had also disappeared and there was no vertigo.

The interesting feature of this case was the sudden loss of vision in the left eye with no history of nasal infection.

The rapid recovery of visual acuity after operation would undoubtedly place this in the class of cases of mechanical pressure on the optic nerve in the optic canal.

A study of the above cases will show that their interesting features lie in the fact that the most important manifestations were produced by involvement of other structures.

In several cases the classical nasal symptoms of obstructed breathing, disturbances in the sense of smell, chronic discharge and tenderness over the sinuses were entirely absent, or were so slight that the patients gave no subjective symptoms of discomfort, so that attention was misdirected to the secondary structures.

It is a common occurrence to find an infected sinus, which produces few or no local symptoms, which may be acting as an active focus of infection resulting in a train of toxic symptoms affecting the general system.

To my mind, too much stress has been given to local nasal symptoms in the past, while the general manifestations have been more or less neglected and their importance as a diagnostic aid has not been appreciated.

For this reason, a careful history and a complete physical examination will often reveal an unsuspected symptom which would be entirely overlooked if we depended only upon the local nasal symptoms. Furthermore, where the diagnostician is dealing with a case presenting symptoms of absorption, it would seem that the reasonable thing to do would be to begin the investigation at the nose and throat, for we know that this is the most vulnerable location for foci of infection.

Instead of this procedure, we often find that the nose and throat are the last to be investigated and are frequently not even considered.

Conclusions.

Many cases of sinus infection show few or no local symptoms, but may be producing severe symptoms in other structures.

The general symptoms are most important, and in any case of chronic absorption from some focal point the nasal structures should be the first to be investigated.

No thorough medical examination should be considered complete without a careful nasal examination.

605 Park Avenue.

BOARD OF TRUSTEES ENDOWMENT FUND UNIVERSITY OF MARYLAND.

Report of B. Merrill Hopkinson, M. D., Treasurer.

Covering the Period January 10, 1921, *to January* 9, 1922.

FACULTY OF PHYSIC FUND.

January 10, 1921, balance Central Savings Bank		$1,085.07
April 12, 1921, interest Central Savings Bank, October-April		15.05
October 1, 1921, interest Central Savings Bank, April-October		14.68
January 1, 1922, interest on all bonds to date		1,685.62
Deduct:		$2,800.42
Jan. 24, 1921, adjustment of interest, exchange of Newburgh L. H. & P. Co. for Central Hudson Gas & Electric Co.	$2.92	
March 9, 1921, 1 1,000 Penna. R. R. 6½ Bonds	992.50	
March 9, 1921, Accrued Interest, 1 month, 9 days	7.04	
March 29, 1921, Coupon Minneapolis G. L. Returned	25.00	
May 25, 1921, Colonial Trust Co. Box	5.00	
November 21, 1921, Coupon Grand Trunk Railway to Hemmeter Fund	35.00	
		1,067.46
January 1, 1922, balance Central Savings Bank		$1,732.96

This Fund consists of:

2	1,000	Am. Agricul. Chem. Co. 5% Bonds	1,963.06
1	500	Central Hudson G. & E. 7% Bond	500.00
3	1,000	Central Hudson G. & E. 7% Bonds	3,000.00
1	1,000	Ga., Car. & Northern 5% Bond	1,000.00
5	500	Regents University of Maryland 5% Bonds	2,500.00
1	1,000	Public Service Corporation of New Jersey 5% Bond	1,000.00
1	1,000	Minneapolis G. L. 5% Bond	1,000.00
1	1,000	Edison Electric Company 5% Bond	1,000.00
1	1,000	Fairmount and Clarksburg Trac. Co. 5% Bond	1,000.00
1	1,000	Consolidated Gas, Baltimore, 4½% Bond	980.00
2	1,000	Omaha & Council Bluffs St. Ry. 5% Bonds	1940.00
2	1,000	Cincinnati Gas & Trans. Co. 5% Bonds	1,960.00
2	1,000	W. Penn. Power Co. 5% Bonds	1,940.00
2	1,000	Cumberland Co. P. & L. 5% Bonds	1,940.00
2	1,000	Louisiana Port Serial Commission 5% Bonds	2,000.00
1	1,000	Grand Trunk of Canada 7% Bond	1,000.00
1	1,000	Pennsylvania Railroad 6½% Bond	1,000.00
1	1,000	Baltimore County 5¾% Bond	1,000.00
1	500	First Liberty Loan 3¼% Bond	500.00
3	1,000	Third Liberty Loan 4½% Bonds	3,000.00
2	1,000	Fourth Liberty Loan Bonds	2,000.00
1	500	Fourth Liberty Loan 4½% Bond	500.00
			$34,456.02

GENERAL ENDOWMENT FUND.

January 10, 1921, balance Central Savings Bank	$498.22
April 1, 1921, interest Central Savings Bank, October-April	8.57
October 1, 1921, interest Central Savings Bank, April-October	14.38
January 1, 1922, interest on all bonds to date	575.62
	$1,096.79
Deduct:	
December 6, 1921, Treasurer's Bond, Maryland Casualty Co.	12.50
January 1, 1922, balance Central Savings Bank	$1,084.29

This Fund consists of:

1	500	Regents University of Maryland, 5% Bond	$500.00
1	1,000	Georgia and Alabama 5% Bond	1,000.00
1	1,000	Georgia, Carolina and Northern 5% Bond	1,000.00
1	1,000	Omaha and Council Bluffs R. & B 5% Bond	1,000.00
1	1,000	Consolidation Coal Company 6% Bond	1,000.00
2	500	Consolidation Coal Company 6% Bonds	1,000.00
2	1,000	St. Jos. Ry. L. H. & P. Co. 5% Bonds	2,000.00
1	1,000	Edison Elec Co. 5% Bond	1,000.00
1	1,000	Baltimore County 5¾% Bond	1,000.00
1	500	First Liberty Loan 3¼	500.00
1	1,000	Third Liberty Loan 4¼% Bond	1,000.00
1	500	Fourth Liberty Loan 4¼% Bond	500.00
			$12,584.29

LEO KARLINSKY FUND.

This Fund consists of:

3	1,000	Great Northern Ry Co. 7% Bonds	$3,000.00

DENTAL FUND.

January 10, 1921—Balance Central Savings Bank	$24.80
April 1, 1921—Interest Central Savings Bank, October-April	.40
November 21, 1921—Interest Central Savings Bank, April-October	.50
January 1, 1922—Balance Central Savings Bank	$25.70

HEMMETER FUND.

January 10, 1921—Balance Central Savings Bank	$77.20
April 1, 1921—Interest Central Savings Bank, October-April	1.58
October 1, 1921—Interest Central Savings Bank, April-October	4.40
January 1, 1922—Interest on all Bonds to date	305.00
	$388.18

This Fund consists of:

1	1,000	Chicago City Railway Bond 5%	1,000.00
1	1,000	Chicago Railways Bond 5%	1,000.00
1	1,000	Minneapolis St. Ry. & St. Paul Ry. Bond 5%	1,000.00
2	1,000	Third Liberty Loan 4¼%	2,000.00
1	1,000	Grand Trunk of Canada Bond 7%	1,000.00
			$6,388.18

CHARLES M. HITCHCOCK FUND.

January 10, 1921—Balance Central Savings Bank		$210.06
April 1, 1921—Interest Central Savings Bank, October-April		3.37
May 18, 1921—Interest 10-500 Regents U. of Md. 5% Bonds		125.00
November 17, 1921—Interest 10-500 Regents U. of Md. 5% Bonds.		125.00
October 1, 1921—Interest Central Savings Bank, April-Oct		2.53
		$465.96
Deduct:		
June 13, 1921—Scholarship, J. P. Franklin	$125.00	
June 13, 1921—Scholarship, W. W. Wilson	125.00	
		250.00
January 1, 1922—Balance Central Savings Bank		$215.96
This Fund consists of:		
10-500 Regents University of Maryland 5% Bonds		5,000.00
		$5,215.96

LEON FRANK FUND.

January 10, 1921—Balance Central Savings Bank		$116.78
April 1, 1921—Interest Central Savings Bank, October-April		1.85
October 1, 1921—Interest Central Savings Bank, April-October		1.53
January 1, 1922—Interest on all Bonds to date		135.00
		$255.16
Deduct:		
January 24, 1921—Adjustment of Int. Exc. of Newburgh L. H. & P. Co. for Cent. Hudson Gas & Elec. Co	$ .42	
June 13, 1921—Scholarship D. S. Fisher	125.00	
		125.42
January 1, 1922—Balance Central Savings Bank		$129.74
This Fund consists of:		
1 500 Central Hudson Gas & Elec. Co. 7% Debenture Bond		500.00
1 1,000 St. Jos. H. L. & P. Co. 5% Bond		1,000.00
1 1,000 Omaha & Council Bluffs R. & B 5% Bond		1,000.00
		$2,629.74

LAW FUND.

January 10, 1921—Balance Central Savings Bank	$166.23
April 1, 1921—Interest Central Savings Bank, October-April	3.30
November 21, 1921—Interest Central Savings Bank, April-Oct	3.30
January 1, 1922—Balance Central Savings Bank	$172.83

PHARMACY FUND.

January 10, 1921—Balance Central Savings Bank	$45.98
April 1, 1921—Interest Central Savings Bank, October-April	.90
November 21, 1921—Interest Central Savings Bank, April-October	.90
January 1, 1922—Balance Central Savings Bank	$47.78

CHARLES FRICK FUND.

January 10, 1921—Balance Central Savings Bank	$398.97
April 1, 1921—Interest Central Savings Bank, October-April	7.87
April 15, 1921—Interest 1-500 Fourth Liberty Loan 4¼%	10.62
November 21, 1921—Interest Central Savings Bank, April-Oct	8.27
January 1, 1922—Balance Central Savings Bank	$425.73
This Fund consists of:	
1 500 Fourth Liberty Loan 4¼% Bond	500.00
	$925.73

RANDOLPH WINSLOW FUND.

January 10, 1921—Balance Central Savings Bank	$70.06
April 1, 1921—Interest Central Savings Bank, October-April	.97
October 1, 1921—Interest Central Savings Bank, April-October	.53
June 1, 1922—Interest on all Bonds to date	125.00
	$196.56
Deduct:	
June 13, 1921—Scholarship, J. J. Krager	125.00
January 1, 1922—Balance Central Savings Bank	$71.56
This Fund consists of:	
5 500 Regents University of Maryland 5% Bonds	2,500.00
	$2,571.56

DAVID STREETT SCHOLARSHIP FUND.

June 10, 1921—Balance Central Savings Bank	$35.16
April 1, 1921—Interest Central Savings Bank, October-April	.60
November 21, 1921—Interest Central Savings Bank, April-Oct.	.75
January 1, 1922—Interest on all Bonds to date	13.69
January 1, 1922—Balance Central Savings Bank	$50.20
This Fund consists of:	
3 100 First Liberty Loan 3½% Bonds	300.00
1 100 Second Liberty Loan 4¼% Bond	100.00
1 50 Fourth Liberty Loan 4¼% Bond	50.00
	$500.20

CATHERINE GIBSON FUND.

January 10. 1921—Balance Central Savings Bank	$613.81
April 1, 1921—Interest Central Savings Bank, October-April	12.00
October 1. 1921—Interest Central Savings Bank, April-October.	13.00
January 1, 1922—Interest on all Bonds to date	60.62
January 1, 1922—Balance Central Savings Bank	$699.43
This Fund consists of:	
2 500 Regents University of Maryland 5% Bonds	1,000.00
1 500 Fourth Liberty Loan 4¼% Bond	500.00
	$2,199.43

TOTAL PAR VALUE ON BOOKS OF ALL FUNDS.

Faculty of Physic Fund	$34,456.02
General Endowment Fund	12,584.29
Hemmeter Fund	6,388.18
Charles M. Hitchcock Fund	5,215.96
Leon Frank Fund	2,629.74
Randolph Winslow Fund	2,571.56
Catherine Gibson Fund	2,199.43
Leo Karlinsky Scholarship Fund	3,000.00
David Streett Scholarship Fund	500.20
Charles Frick Fund	925.73
Pharmacy Fund	47.78
Law Fund	172.83
Dental Fund	25.70
	$70,717.42

B. Merrill Hopkinson, M. D.,

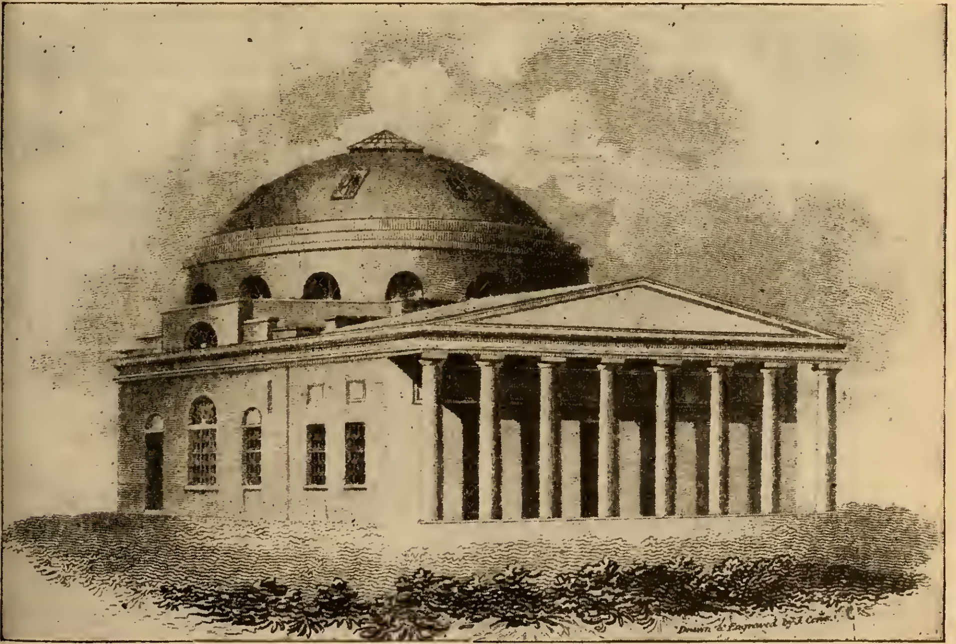
Secretary-Treasurer.

January 9, 1922.

Since the above report was made, the Trustees have received a check for one thousand dollars from the Daughters of the American Revolution to endow a bed in the Maternity Ward of the Hospital.

B. Merrill Hopkinson, M. D.,

Secretary-Treasurer.


Drawn & Engraved by J. Cone.

Main University Building.

EDITORIAL.

THE LEO KARLINSKY SCHOLARSHIP.

Friends of the Medical Department will be glad to hear that Mrs. Leo Karlinsky has given to the Board of Trustees of the Endowment Fund $3,000.00 for the establishment of a scholarship in memory of her husband, Doctor Leo Karlinsky, class of 1906, who died June 13th, 1921, aged 36 years. It was both a most gracious as well as acceptable gift coming as it does on the threshold of the reorganization of the University. We hope that Mrs. Karlinsky's example will be followed by many more of our well-wishers. Money thus invested works perpetually and besides helping the University also helps a student to obtain an education. The Bulletin takes this opportunity to thank Mrs. Karlinsky for her most generous gift.

OLD UNIVERSITY BUILDING GUTTED BY FIRE.

Our alumni will regret to hear that Saturday, February 25, 1922, the main University building was visited by fire which gutted the lecture halls. Fortunately the damage was limited to Chemical and Anatomical Halls. No cause could be determined for its origin. It started beneath Chemical Hall and had soon gained such headway that the whole building seemed doomed. We all love this old building which is now more than a hundred years old. It was begun May 7, 1812, and was so far completed as to be used for lecture purposes at the beginning of the ensuing session. Though it is now an antiquated structure at the time of its completion it was the finest structure devoted to medical education in the New World. It is constructed on the plan of the Pantheon at Rome and is today still one of the notable landmarks of the city.

ALL ALUMNI, TAKE NOTICE.

The Annual Meeting of the Alumni Association is to be held in Osler Hall, Medical and Chirurgical Faculty Bldg., 1211 Cathedral Street, Baltimore, May 29, 1922, at 8 P. M., sharp. Besides routine business and speeches by representative men, officers will be elected for the ensuing year.

The Alumni Association is, as you are well aware, composed of the graduates of the three schools which were combined into what is now known as the medical school of the University of Maryland. What is well known and as often said, a school will become just as great as its alumni want it to become. It therefore behooves our alumni to bear in mind that the future greatness of our Alma Mater is in their keeping. We do not come to you seeking money, but we do demand your hearty moral support. The people of Maryland want a great University and are carefully scrutinizing the efforts being made to place this school on a University basis. To accomplish this, financial support must be forthcoming from the State. Past Legislatures have been very liberal in their aid, but it is imperative that the next Legislature grant larger beneficences, if the University of Maryland hopes to keep abreast of the other great state universities. With united forces the unattainable is attainable, the insurmountable surmountable, so turn out in full force and show the public we are in earnest.

Clinics will be given May 29, 30 and 31 at the Mercy and University Hospitals by members of the staff.

The class of 1912 will hold its tenth reunion. The details are in the hands of Dr. M. L. Lichtenberg, 2224 Madison Avenue, chairman of the local committee on arrangements.

Your executive committee in consultation with the deans of the various departments decided to hold a joint banquet of the several schools constituting the University of Maryland.

The Annual Banquet will be held at the City Club, Munsey Bldg., S. E. corner of Calvert and Fayette Streets, at 8 P. M., May 31, 1922; price per cover, $3.00. As the seating capacity is somewhat limited requests for reservations cannot be accepted after May 29. In order that the banquet committee may make proper provision for its guests, it urges all those who wish to attend to send their check at once to Frank L. Black, treasurer, 2839 W. North Avenue, Baltimore, Md.

A ticket of admission will be mailed only to those whose acceptance is accompanied with the price of the subscription.

President.........J. B. Schwatka, M. D.
Vice-Presidents....J. M. H. Rowland, M. D.
R. P. Bay, M. D.
Guy Steele, M. D.
Secretary.........W. S. Love, M. D., 836 W. North Ave.
Treasurer.........C. U. Smith, M. D.
Necrologist........W. J. Todd, M. D.
Advisory Council...R. Winslow, M. D.
R. L. Mitchell, M. D.
W. J. Todd, M. D.
Hiram Woods, M. D.
F. R. Malone, M. D.

SENIOR CLASS.

Hospital Appointments Reported to Date.

BAILEY, H.—Hebrew Hospital.
BUCHNESS, A. V.—University Hosptial.
CHAMPE, Jr., I. P.—University Hospital.
DOSHAY, L. J.—Staff, Mercy Hospital.
FLEISCHMANN, B.—City Hospital, New York City.
FRITZ, J. D.—St. Mark's Hospital, 175 Second Ave., New York.
FULTON, WM. J.—University Hospital.
GOLDMANN, B. A.—Allegheny General Hosptial, Pittsburgh, Pa.
GOLLICK, WM. A.—Maryland General Hospital.
GORDON, E.—Maryland General Hospital.
GREENBAUM, L. H.—Hebrew Hospital.
GROFF, MORRIS.—Brownville and East New York Hospital.
HALLEY, GEO. C.—University Hospital.
HATFIELD, D. S.—Maryland General Hospital.
HOLLISTER, WM.—University Hospital.
HUFF, WM.—University Hospital.
INGRAM, D. N.—Western Pennsylvania Hospital, Pittsburgh, Pa.
KEEFE, GEO. G.—St. Francis Hospital, Hartford, Conn.
KERDASHA, G. S.—Jersey City Hospital, Jersey City, N. J.
KRAGER, J. J.—St. Joseph's Hospital.
KINKOWSKI, A.—St. Joseph's Hospital.
LANG, M. C.—University Hospital.
LAWSON, L. W.—University Hospital.
LINKE, J. P.—Muhlenberg Hospital, 6 mos.; University of Berlin, 18 mos.
McCOY, C. G.—Mercy Hospital.
MERCIER, A. S.—St. Joseph's Hospital.
MIDDLEMISS, WM. R.—County Hospital, Salt Lake City, Utah.
MORGAN, E. N.—Buffalo City Hospital, Buffalo, N. Y.
NOLL, LOUIS—Hebrew Hospital.
O'CONNOR, J. A.—St. Joseph's Hospital.
PETERS, J. R.—Mercy Hospital.
PITTMAN, H. L.—Maryland General Hospital.
PULLEN, G. F.—Mountainside Hospital, Montelau, N. J.
RHODES, B. M.—University Hospital.
RUDISILL, J. D.—Mercy Hospital.
SALZBERG, A.—Hospital for Women of Maryland.
SAPORITO, A. R.—Mercy Hospital.
SEKERAK, A. J. F.—St. Francis Hospital, Bridgeport, Conn.
SHANNON, G. E.—Resident Obstetrician, Maryland General Hospital.
SHAPIN, SYDNEY—Volunteer Hospital, New York.
SHAPIRO, L. M.—Grace Hospital, New Haven, Conn.
STOUT, P. D.—Ohio Valley General Hospital.
STOVIN, J. S.—Governeur Hospital, New York.
TRYNIN, A. H.—Kings County Hospital, New York.
WARFIELD, J. C.—Women of Maryland, Hospital for.
WILSON, T. K.—University Hospital.

MARRIAGES.

Dr. Harry M. Stein, class of 1914, for three years superintendent of the University Hospital, Baltimore, and a member of the A. E. F. in France, was married October 17, 1921, to Miss Marguerite Eugenia Risley, class of 1917, University Hospital Training School for Nurses and until recently supervisor of the operating rooms, University Hospital. Dr. and Mrs. Stein reside at 1315 Mt. Royal Avenue, Baltimore, Md.

Dr. Benjamin Bruce Brumbaugh, class of 1916, of Elkridge. Md., was married November 5, 1921, to Miss Miriam Lee Smith, daughter of Mrs. William Lee Smith, of Baltimore. Dr. and Mrs. Smith will reside at Elkridge, Md.

Dr. Charles Carrol Habliston, class of 1914, of the Medical Department, University of Maryland, was married September 17, 1921, to Miss Sasa Louise Sharp, daughter of Mr. and Mrs. Louis Dent Sharp, of Fort Benton, Montana. Dr. and Mrs. Habliston have taken up their residence at the Montreal, Baltimore, Md.

Dr. George Edward Wells, class of 1921, of Baltimore, was married September 26, 1921, to Miss Pauline Stotler Wilson, of Keyser, W. Va.

Dr. Alexander J. Gillis, of Baltimore, was married September 28, 1921, to Miss Helen Costello, of Baltimore.

DEATHS.

Dr. Young Hance Bond, class of 1867, former president of the Medical Society of St. Louis, member of the Board of Health; founder 1890 and president of the Marion Sims College of Medicine, St. Louis, until it became the medical department of St. Louis University in 1903, of which he was dean for three years; founder of the St. Louis Dental College; died February 5, 1922, from angina pectoris, aged 75.

Dr. William Culbert Lyon, class of 1907, Lieutenant, M. C., U. S. N., retired, died at his home, Valatie, N. Y., February 6, 1922, aged 42.

Dr. William Rowley, Gloucester, Mass., B. M. C., class of 1893, died January 29, 1922, aged 57.

Dr. Arthur Blake Clarke, class of 1906, died January 31 from lobar pneumonia, aged 51.

Dr. John C. Anderson, Greenwood, Va., P. & S., class of 1876, died November 25, 1921, from carcinoma of the prostate, aged 70.

Doctor William Eilau, class of 1879, died suddenly February 1, 1922, from heart disease, aged 68.

Doctor William Samuel Hutchinson, Anderson, S. C., B. M. C., class of 1897, died December 29, 1921, of chronic nephritis, aged 46.

Doctor E. N. Crawford, Cecilton, Md., P. & S., class of 1874, died March 3, 1922, from appendicitis, aged 70.

Doctor Silas W. Hunter, Wiseburg, Md., P. & S., class of 1874, died January 19, 1922, aged 72, from carcinoma of the stomach. He was formerly a resident physician at Bayview Hospital, Baltimore.

Doctor Jacob Jones Wilson, Cumberland, Md., P. & S., 1871, president of the staff of the Western Maryland Hospital, Cumberland, died February 24, 1922, aged 73.

Dr. Edward Martin Wise, class of 1877, of Baltimore, died February 5, 1922, aged 67. He had retired as an active practitioner nine years ago.

Doctor William L. Mauldin, class of 1901, of Greenville, S. C., died March 3, 1922. He had been in failing health for three years. Doctor Mauldin was born April 18, 1877. Immediately after graduating he located in Greenville, where he succeeded in building a lucrative practice. By his cheerful temperament, kindness and considerateness he had endeared himself to a large circle of friends and patients.

Doctor B. B. Brown, Sr., class of 1867, a widely known gynecological specialist, of Baltimore, died March 10, 1922, aged 79, from the infirmities of age. He was one of the founders and professor of gynecology in the Woman's Medical College, Baltimore.

Doctor Clarence H. Scoville, New Canaan, Conn., B. M. C., class of 1892, died recently from chronic nephrities, aged 70.

Doctor Frank G. Wilson, class of 1896, of Gastonia, N. C., a member of the Medical Society of the State of North Carolina, died November 13, 1921, from cerebral hemorrhage, aged 48.

Doctor John Luther McMillan, Red Springs, N. C., class of 1881, died November 8, 1921, from heart disease, aged 66.

Doctor Edward Hamilton Holbrook, class of 1868, of Los Angeles, died suddenly February 1, 1922, aged 76.

Dr. Wyatt Reid Arnold, Bedford, Va., P. & S., class of 1886, member of the Medical Society of Virginia, died January 21, 1922, aged 56, from tuberculosis.

Dr. William Pierce Matthews, Sacramento, Cal., Washington University School of Medicine, class of 1868, died December 29, 1921, from cerebral hemorrhage, aged 78.

Dr. Ramon C. Deliz, a native of Porto Rico and formerly resident gynecologist in the University Hospital, died recently of typhoid fever. He is survived by his wife, Mrs. Helen M. Deliz, a daughter of Mr. and Mrs. Louis C. Morseberger, of Baltimore.

Dr. John Frederick Wright, of Keezletown, Va., P. & S., 1876, and a member of the Medical Society of Virginia, died June 26, 1921, aged 68.

Dr. Arthur White, Rockport, Ind., class of 1854, died August 11, 1921, aged 89. He served as a surgeon in the Civil War.

Dr. Melvin B. Squires, of Flatwood, W. Va., P. & S., 1893, was killed September 26, 1921, in a railway accident, aged 53.

Dr. Sherman M. Kline, of Scranton, Ia., P. & S., 1900, died September 22 from diabetes, aged 47.

Ulysses Grant M. McHugh, M. D., Pittsburgh, Pa., B. M. C., 1898, died November 2, 1921, from pleuropneumonia, aged 52.

Frank Paul, M. D., of 2401 East Preston St., Baltimore, Md., a graduate of the College of Physicians and Surgeons, died November 11, 1921, from peritonitis. Dr. Paul was born in Baltimore and was unmarried. After graduation he served a year as an interne in the Mercy Hospital. He then went to Milwaukee where he served some time as a resident in a hospital, thence he returned to Baltimore and joined the staff of St. Joseph's Hospital. He then again went West, this time to Iowa. A year later he returned to Baltimore and became identified with Dr. Bloodgood in the pathological department at the Johns Hopkins Hospital.

Lewis H. Gundry, M. D., of Relay, Md., P. & S., 1890, died September 15, 1921, of a complication of diseases, aged 53. He was born in Dayton, Ohio, where he received his early education. After graduating in medicine he specialized in the treatment of nervous and mental diseases. Many years ago he opened the Relay Sanatorium, which institution was devoted to the management of nervous and mental diseases only. He was a brother of Dr. Richard F. Gundry of Catonsville, Md.

Cary B. Gamble, M. D., of Baltimore, Md., class of 1846, died November 8, 1921, at his home from the infirmities of old age, aged 97. He was the father of Dr. Cary B. Gamble, Jr., and practiced in Baltimore from the end of the Civil War until retirement 20 years ago. At the time of his death he was the oldest living alumnus of the University of Maryland, School of Medicine. He led an active and varied career, witnessed the many revolutionary changes in medicine of the 19th Century and died beloved and respected by all of those who knew him. For a sketch of his life see the October number of the Bulletin (editorial). We sincerely regret that his death has followed the editorial notice so quickly.

Clinton H. Coy, M. D., Napoleon, Ohio, P. & S., 1888, died August 9, 1921, after an illness of three months, aged 66.

Robert B. Patrick, Waycross, Ga., class of 1912, died August 8, 1921, following an operation for appendicitis, aged 35.

Doctor James H. Jarrett, at the time of his death the oldest living alumnus of the University of Maryland, class of 1852, of Towson, Md., died February 12, 1922. He was the son of Luther M. Jarrett, and was born at Jarrettsville, Md., in 1832. At the time of his death he was in his 90th year. Immediately after graudating he began the practice of medicine in Jarretsville. He served as a member of the House of Delegates in 1855-1856. When President Lincoln issued the call for volunteers he gave up his practice and entered the Union Army, while a brother, Dr. Martin L. Jarrett, went to Virginia to join General Lee. At first he served with Purnell's legion, afterwards joining the 7th Maryland Regiment. After the war Dr. Jarrett located at Towson and resumed the practice of medicine. He was a fine example of the old country doctor, a fast disappearing type of the old Southern gentleman, a highly respected and beloved member of the profession and of the community in which he labored. During Dr. Jarrett's career he saw many changes and advances in his chosen profession. Anesthesia had been discovered and anesthetics employed, but medicine and surgery such as it is today was undreamt of. The miscroscope was a curiosity. Histology and embryology were not taught. Antiseptic and aseptic surgery were a later development. Only operations of necessity and urgency were performed and surgery such as we know it was unknown. He saw and participated in the most revolutionary changes in medicine.

Dr. Robert Lee Blake, formerly of Baltimore B. M. C., class of 1905, and a son of the late Professor of Surgery, John D. Blake, died April 21, 1922. He practiced medicine in Baltimore until two years ago when he retired owing to ill health. Since that time he has been living with his brother, Dr. J. D. Blake, Jr., in Middlesex County, Virginia. Dr. Herbert C. Blake, 1014 W. Lafayette Avenue, Baltimore, is a brother.

Dr. Charles W. Gravatt, of Port Royal, Va., P. & S., 1870, formerly a surgeon in the United States Navy, died April 14, 1922, aged 72.

Dr. George B. Malone, of Memphis, Tenn., Washington University School of Medicine, class of 1872, a Confederate Veteran, died April 13, 1922, aged 77, from cerebral hemorrhage.

Dr. Robert G. Black, Vancouver, Washington, P. & S., 1886, died April 16, 1922, aged 58.

Dr. Thomas Benton Ashby, Mt. Airy, N. C., P. & S., 1885, died April 10, 1922, aged 50, from heart disease.

Dr. Simon P. Rentz, Branchville, S. C., class of 1891, died March 22, 1922, from a broken neck incurred in an automobile accident.

Dr. George A. Fleming, of Baltimore, Md., class of 1884, died April 17, 1922, from heart disease, aged 60.

Dr. Henry B. Thomas, of Baltimore, class of 1888, died April 2, 1922, from heart disease, aged 57. One of Baltimore's most useful citizens has gone.

Dr. James G. Turner, Houghton, Mich., class of 1878, died suddenly April 4, 1922, aged 65, from heart disease.

Dr. Cyrus F. Bowers, Fairmont, W. Va., B. M. C., 1882, died November 18, 1921, aged 79.

Dr. Thomas E. Krum, Reading, Pa., P. & S., 1886, died November 21, 1921, following a nervous breakdown, aged 61.

Dr. Samuel R. Gregory, Mount Union, Pa., P. & S., 1896, died March 9, 1922, aged 51, from pneumonia.

Dr. William Henry Davis, Millerton, N. Y., class of 1903, died March 12, 1922, aged 42.

Dr. Arthur Joseph Campbell, Middletown, Conn., P. & S., 1885, died March 5, 1922, aged 65.

Dr. Eli Sheridan Parsons, Slingerlands, N. Y., P. & S., 1892, Long Island College Hospital, 1895, died March 22, 1922, from a fractured skull received in an automobile accident March 21, 1922, aged 54.

Dr. Wilson McClellan, Ashland, Ohio, B. M. C., 1895, served in the World War, died recently, aged 64.

Dr. Reuben T. Ramsey, Gretana, Va., P. & S., 1879, died February 28, 1922, aged 64.

Dr. Harvey Bowers, Sugar Grove, W. Va., class of 1893, died March 2, 1922, from pneumonia.

Dr. Edward N. Crawford, Cecilton, Md., P. & S., 1874, died March 4, 1922, aged 70, from appendicitis.

Dr. William Hall Thomas, Steeles Tavern, Va., B. M. C., 1889, died March 11, 1922, aged 63, from cerebral hemorrhage.

Dr. Frederick Lincoln Johnson, Stanton, N. J., P. & S., 1889, died March 8, 1922, aged 57, from pneumonia.

Dr. Zacharias D. Ridout, of Anne Arundel County, Md., class of 1869, died May 7, 1922, from a general breakdown.

BOOK REVIEWS.

Ephraim McDowell, Father of Ovariotomy and Founder of Abdominal Surgery. By August Schachner, M. D., F. A. C. S. Philadelphia and London: J. B. Lippincott Company, 1921.

This is a piece of patriotic literary work by Dr. Schachner, of Louisville, Ky., rescuing from oblivion many of the pertinent facts connected with the history of Dr. Ephraim McDowell, the originator of ovariotomy and the founder of abdominal surgery, with a short appendix on the life of Mrs. Jane Todd Crawford, the patient upon whom the first ovariotomy in the history of the world was performed. It has been thought by many that the first patient upon whom McDowell operated upon for ovaritomy was a negress. This is a mistake as Mrs. Crawford was a respectable white woman from whom has descended some of the most prominent families of Kentucky. It is a book well worth careful study, both from its historical viewpoint as well as many side lines of historical interest. Dr. Schachner has performed a service of the greatest value. He causes us to pause for a while and pay homage to those who have made abdominal section the boon it is today to so many suffering with intraabdominal disorders of one sort or another. Little do most of us realize the debt we are under to our predecessors for the knowledge they have handed down to us without let or hindrance. The womanhood of the world, irrespective of race, creed or color are indebted for renewed health and happiness through the vision of this truly great American surgeon; and to the brave Jane Todd Crawford. Future students of the lives of these benefactors of the human race are perpetually indebted to Dr. Schachner for the collection of a mass of data not available to earlier historians.

Abdominal Pain. By Prof. Dr. Norbert Ortner, Chief of the Second Medical Clinic at the University of Vienna. Translated by William A. Brams, M. D., formerly Lieutenant Commander, Medical Corps, U. S. N., and Dr. Alfred P. Luger, First Assistant, Second Medical Clinic, University of Vienna. New York: Rebman Company, 1922.

It is pain more than any other symptom that brings the patient to the doctor. People will put up with most anything but pain, therefore it is important for the physician to be able to properly interpret the significance of pain and especially is this the case when applied to the abdomen. In the above book of some three hundred and fifty odd pages the author discusses the symptom pain as it is met with in the various intraabdominal crises as well as those extraabdominal conditions which cause pain in the abdomen. It contains a wealth of material which can for the most part only be obtained by a wide search of the literature. It treats a live question in a live way. It gives us much pleasure to recommend it to our readers.

Infant Feeding. By Clifford G. Grulee, M. D., LL. D., Associate Professor and Acting Head Department of Pediatrics at Rush Medical College. Fourth Edition, Thoroughly Revised. Octavo of 397 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $4.50 net.

What is one man's food is another man's poison, applies to the feeding of infants as well. During the past decade great strides have been made in the feeding of the adult, equally as important advances have been made in the feeding of children. No two children can be fed exactly alike, therefore feeding by rule is a dead number and the needs of each child must be determined if the baby is to be properly nourished. Grulee takes up in turn the anatomy and physiology of the gastro intestinal tract; absorption and metabolism; the bacteriology of the gastrointestinal tract; the technic of breast nursing of the normal infant; artificial foods and feeding; the premature child; the exudative diathesis; infant feeding in rickets; infantile scurvy; infant feeding in eczema; congenital pyoloric stenosis and pylorospasm, etc. The author has had wide experience in feeding infants as well as teaching students. He is therefore well informed concerning the difficulties confronting the beginner in outlining a sensible dietary. Students and general practitioners of medicine desirous of obtaining a sound foundation in modern methods of baby feeding will find this book most satisfactory either as a text or reference book.

Psychoanalysis: Its Theories and Practical Application. By A. A. Brill, Ph. B., M. D., Lecturer on Psychoanalysis and Abnormal Psychology, New York University. Third Edition, Thoroughly Revised. Octavo of 468 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $5.00 net.

For some years now psychoanalysis has been receiving the attention of both the medical profession and the layman. As early as 1895 Breuer and Freud found that hysterical symptoms could be traced to actual psychic traumata which the patient could not consciously recall, but which could be readily demonstrated when the patient was put in the hypnotic state. In other words hysteria has an actual cause. Breuer and Freud then concluded that these psychic traumata act like foreign bodies in consciousness, and even long after their occurrence continue to exert their malign influence. Brill outlines in his book how these ideas become impregnated in the mind and the processes by which the psychoanalyst goes about unravelling the complex pictures into their component elements. Whether one believes the theories enumerated or not, a careful study of the text is well worth the time. The author not only discusses the question of dreams but many other neusoses in a most convincing manner as based on some repressed sexual activity and adduces many examples from his practice as proof of his assertions. Certainly the most biased physician will admit that the class of patients in question are the bane of their existence. Therefore any suggestions which tend to their relief are well worth while. The methods of procedure suggested by the author can under no circumstance do harm, consequently their application in the cure of an individual so afflicted are worthy of an extended trial before condemnation. We suggest that every general practitioner should familiarize himself with a working knowledge of the system advocated by the writer.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph. D., Professor of Bacteriology in the University of Chicago and in the Rush Medical College. Seventh Edition, Thoroughly Revised. Octavo of 774 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5.00 net.

During the past few years many additional facts have been established concerning influenza, pneumonia, typhus fever, immunity and cognate subjects. The present edition of this book concerns itself mostly with these changes, so that it now has been brought up to the state of efficiency of its predecessors. It is a thoroughly reliable and trustworthy guide to the study of bacteriology whose price places it within reach of all interested in the subject of which it treats. From every angle it is an exceptional example of the book-makers art. Students of bacteriology will be as much pleased with it as its predecessors and will find it of great service in overcoming the intricacies of their bacteriological studies. We know of no better moderate priced book on the subject.

Diseases of the Skin and Eruptive Fevers. By Jay Frank Shamberg, M. D., Professor of Dermatology and Syphilis, Graduate School of Medicine, University of Pennsylvania. Fourth Edition, Thoroughly Revised. Octavo of 626 pages, 265 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5.00 net.

Shamberg's Diseases of the Skin and Eruptive Fevers has already made its mark and is sufficiently well known to need no further recommendation. This edition is fully up to the standard of its predecessors and should give every bit as much satisfaction to its possessors. Students and general practitioners will find that it covers the field sufficiently well for their purposes and in understandable English. What is more to the point it is put out at popular and pre-war price. It is thoroughly up-to-date, well illustrated, and reliable. As a practical moderate priced treatise, there is no better on the market. It covers both the usual and rare skin lesions in sufficient detail for practical purposes. It gives us great pleasure to recommend it to our readers.

A Form of Record for Hospital Social Work. By Gertrude L. Farmer, Director, Department of Social Work of the Boston City Hospital, Boston, Massachusetts. 1921. Cloth, $1.50 net. Philadelphia, London and Montreal: J. B. Lippincott Co.

This book will be found of inestimatable value to the social worker be she a novice or an old hand in the game. The record which the author suggests is for a specialized form of social work, primarily adapted for the use of hospitals dealing with large numbers of both ward and out-patients. Its chief purposes are:

1. A realization that all hospital social record writing is more or less of a bugbear to the case worker.

2. The evolving of a scheme of recording which has already appealed to many as more efficient for hospital social work than those ordinarily in use.

3. A demonstration of the record scheme used by the author.

4. A collection of material for the use of students in training for hospital social work.

The form of record used by the author is based on the individual rather than the family. Rightly she claims it is the individual who is most intimately concerned; therefore the form of record employed.

Those having to do with the indigent in and out-patient have come to thoroughly realize that the social worker is as necessary to the proper handling of these patients as the medical service rendered. Therefore any light that can be thrown upon the subject which will render a more efficient solving of the problems of the social worker, is indeed a welcome addition to our sources of information. A careful study of the scheme evolved by Gertrude L. Farmer should be of material help to each and every hospital social worker and a most welcome addition to her armamentarium. Social work is no longer a trade, it has developed into a highly specialized profession. The problems to be solved are many and oftentimes intricate. To accomplish the most good with the least expenditure of effort and money is the object of the highly trained and efficient social worker. A study of the plan evolved in this book cannot be without profit to those concerned in this phase of modern effort.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of OFFICIAL PUBLICATION OF THE UNIVERSITY OF MARYLAND, BULLETIN OF THE SCHOOL OF MEDICINE, published 4 times yearly at Baltimore, Maryland, for April, 1922.

State of Maryland, ss.:

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Nathan Winslow, who, having been duly sworn according to law, deposes and says that he is the Editor of the Official Publication of the University of Maryland, Bulletin of the School of Medicine, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

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NATHAN WINSLOW.

Sworn to and subscribed before me this 20th day of March, 1922.

(Seal) Eleanore H. Muhly.

(My commission expires May 1, 1922.)

INDEX.

Alumni Association ... 80
Annual Appointments ... 39
Board of Instruction ... 6
Board of Regents ... 4
Calendar ... 2
Consolidaiton of Schools ... 30
Curriculum ... 48
Dispensaries ... 36

Dispensary Staffs:
  Mercy Hospital ... 17
  University Hospital ... 12
Endowment Fund ... 79
Expenses, Students' ... 47
Fees ... 44
Graduates ... 28

Hospitals:
  Franklin Square ... 33
  James Lawrence Kernan ... 35
  Maternity Hospital of the University of Maryland ... 33
  Mercy Hospital ... 32
  Mount Hope Retreat for the Insane ... 35
  Municipal Hospital ... 34
  Sheppard and Enoch Pratt Hospital for the Insane, The ... 35
  St. Vincent's Infant Asylum ... 35
  University Hospital ... 31
  West End Maternity ... 34

Laboratories:
  Anatomical ... 37
  Biological Chemistry ... 38
  Clinical Pathology ... 38
  Histology and Embryology ... 38
  Pathology and Bacteriology ... 38
  Physiology ... 37
  Pharmacology ... 52
Libraries ... 39
Matriculates ... 24
Medical Council ... 5
Postgraduate Students ... 43
Prizes ... 45
Prizemen ... 29
Requirements for Matriculation ... 40
Rules ... 44
Schedule ... 72
Scholarships ... 46
Special Courses ... 45

Staffs:
  City Hospital at Bay View ... 21
  James Lawrence Kernan Hospital ... 19
  Mercy Hospital ... 14
  Nursey and Child's Hospital ... 22
  St. Vincent's Infant Asylum ... 23
  University Hospital ... 10

Training School for Nurses:
  Mercy Hospital ... 77
  University Hospital ... 76
University Council ... 4
University of Maryland, Organization of ... 3

UNIVERSITY OF MARYLAND, GENERAL

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University of Maryland School of Medicine

AND

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Successor to THE HOSPITAL BULLETIN, of the University of Maryland, BALTIMORE MEDICAL COLLEGE NEWS, and the JOURNAL of the Alumni Association of the College of Physicians and Surgeons.

VOL. VII JULY, 1922 No. 1

ANNUAL ANNOUNCEMENT.

SESSION 1922-1923.

CALENDAR

1922-1923.

SCHOOL OF MEDICINE.

September 18 to 25, Inc.—Examinations for advanced standing.

October 2—Regular session begins.

November 30—Closed (Thanksgiving Day).

December 21—Christmas recess begins after last lecture period.

January 2—Lectures resumed 9 A. M.

February 22—Closed (Washington's Birthday).

March 29—Easter recess begins after last lecture period.

April 3—Lectures resumed. 9 A. M.

June 9—Commencement.

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Randolph Winslow, A.M., M.D., LL.D.
Joseph W. Holland, M.D.
Nathan Winslow, A.M., M.D.
Arthur M. Shipley, M.D.
Page Edmunds, M.D.
Frank S. Lynn, M.D.
Charles Reid Edwards, M.D.

Laryngologist.

Edward A. Looper, M.D.

Proctologists.

G. Milton Linthicum, A.M., M.D.
J. Dawson Reeder, M.D.

Orthopedic Surgeons.

R. Tunstall Taylor, A.B., M.D.
Compton Riely, M.D.

Genito-Urinary Surgeons.

Page Edmunds, M.D.
W. H. Toulson, M.S., M.D.

Roentgenologist.

Henry J. Walton, M.D.

Dermatologist.

Harry M. Robinson, M.D.

Obstetricians.

L. E. Neale, M.D.
L. H. Douglas, M.D.
J. M. H. Rowland, M.D.
J. G. M. Reese, M.D.

Ophthalmologists and Otologists.

Harry Friedenwald, M.D.
William Tarun, M.D.
Hiram Woods, A.M., M.D.

Gynecologists.

J. Mason Hundley, M.D.
Hugh Brent, M.D.
W. S. Gardner, M.D.
R. G. Willse, M.D.

RESIDENT STAFF.

Resident Physician.

Leon Freedom, M.D.

Resident Surgeon.

L. H. Brumback, M.D.

Resident Gynecologist.

Earle E. Broadrup, M.D.

Resident Obstetrician.

J. Morris Reese, M.D.

Resident Pathologist.

W. Horsley Gantt, M.D.

Resident Pediatrician.

John F. Aubrey, M.D.

Internes.

C. F. Fisher, M.D.
J. W. Guyton, M.D.
T. N. Wilson, M.D.
J. R. Kemp, M.D.
Thomas R. O'Rourke, M.D.
William Huff, M.D.
Ira P. Champe, M.D.
G. C. Halley, M.D.
A. V. Buchness, M.D.
M. C. Lang, M.D
William Hollister, M.D.
Bricey M. Rhodes, M.D.
William Fulton, M.D.

UNIVERSITY HOSPITAL DISPENSARY STAFF.

Medicine.

H. M. Stein, M.D., *Chief of Clinic.*

Horace Byers, M.D.
C. R. Goldsborough, M.D.
S. R. Clarke, M.D.
G. L. Zimmerman, M.D.
B. B. Brumbaugh, M.D
L. L. Gordy, M.D.
W. G. Clopton, M.D.

Diseases of Stomach and Intestine.

J. H. Ullrich, M.D., *Chief of Clinic.*

Joseph Sindler, M.D.
Z. Morgan, M.D.
Paul F. Wiest, M.D.
M. S. Koppelman, M.D.
N. J. Davidov, M.D.
W. H. Gantt, M.D.

Pediatrics.

Charles L. Summers, M.D., *Professor of Pediatrics.*
C. L. Joslin, M.D., *Chief of Clinic.*

B. J. Ferry, M.D.
John Houff, M.D.
W. H. Ingram, M.D.
John H. Traband, M.D.
W. G. Geyer, M.D.
George E. Wells, M.D.
F. B. Smith, M.D.
P. Artigiani, M.D.
R. S. Kirk, M.D.
J. F. Hawkins, M.D.
Wm. G. Todd, M.D.
H. H. Warner, M.D.
C. R. Goldsborough, M.D.

Neurology.

Irving J. Spear, M.D., *Professor of Neurology.*
G. M. Settle, M.D., *Chief of Clinic.*

J. A. Skladowsky, M.D.
B. Pushkin, M.D.

Psychiatry.

R. M. Chapman, *M.D., Professor of Psychiatry.*

Paul J. Ewerhardt, M.D.
George E. Clarke, M.D.

Tuberculosis.

J. E. O'Neill, M.D., *Consultant.*
C. C. Habliston, M.D., *Chief of Clinic.*

Surgery.

Charles Reid Edwards, M.D., *Chief of Clinic.*

H. M. Foster, M.D.
C. A. Reifschneider, M.D.
E. S. Perkins, M.D.
W. K. Harryman, M.D.
E. S. Johnson, M.D.
D. E. Fay, M.D.
W. R. Johnson, M.D.
James Brown, M.D.
C. F. Horine, M.D.

Orthopedics.

R. Tunstall Taylor, A.B., M.D., *Professor of Orthopedic Surgery.*
Compton Riely, M.D., *Chief of Clinic.*

W. H. Daniels, M.D.
H. L. Wheeler, M.D.
W. H. Darby, M.D.

Genito-Urinary.

W. H. Toulson, M.D., *Chief of Clinic.*
Austin H. Wood, M.D. Amos F. Hutchins, M.D.

X-Ray.

Henry J. Walton, M.D., *Roentgenologist.*
Miss Sue W. Shriver, *Technician.*

Dermatology.

H. M. Robinson, M.D., *Chief of Clinic.*
J. E. Gately, M.D. J. A. Buchness, M.D.

Gynecology.

R. G. Willse, M.D., *Chief of Clinic.*
G. A. Strauss, M.D. T. K. Galvin, M.D.
J. M. Hundley, Jr., M.D. Nathan Winslow, M.D.
Leo Brady, M.D.

Obstetrics.

L. H. Douglass, M.D., *Chief of Clinic.*
F. H. Machin, M.D. J. G. M. Reese, M.D.
J. W. Ebert, M.D. Dudley Pleasants Bowe, B.A., M.D.
Stanley G. Matthews, M.D.

Eye and Ear.

Harry Friedenwald, M.D., *Professor of Ophthalmology and Otology.*
J. W. Downey, M.D.
H. L. Sinsky, M.D., *Chief of Clinic.*

Nose and Throat.

E. A. Looper, M.D., *Clinical Professor of Diseases of Throat and Nose.*
Frank B. Anderson, *Chief of Clinic.*
George Murgatroyd, M.D. Charles J. Norton, M.D.
H. R. Lickle, M.D.

Social Service.

Miss Grace Pearson, *Directress.*

MERCY HOSPITAL STAFF.

SURGICAL DIVISION.

Archibald C. Harrison, M.D. Alexius McGlannan, M.D.
C. F. Blake, M.D. W. D. Wise, M.D.

Associate Surgeons.

Elliott H. Hutchins, M.D.
R. H. Locher, M.D.
Thomas R. Chambers, M.D.
Harvey B. Stone, M.D.
A. M. Evans, M.D.
William W. Requardt, M.D.
F. L. Jennings, M.D.

Assistant Surgeons.

Amos Hutchins, M.D.
I. O. Ridgely, M.D.
N. C. Marvel, M.D.
F. X. Kearney, M.D.
Chas. Maxon, M.D
H. B. McElwain, M.D.
Everard Briscoe, M.D.

Ophthalmologist and Otologist.

Harry Friedenwald, M.D.

Associates.

H. K. Fleck, M.D.
J. W. Downey, M.D.

Rhinologists and Laryngologists.

Frank D. Sanger, M.D.
George W. Mitchell, M.D.

Associate Rhinologists and Laryngologists.

W. F. Zinn, M.D.
Raymond McKenzie, M.D.

Proctologist.

Charles F. Blake, M.D.

Assistant.

L. J. Rosenthal. M.D.

Orthopedic Surgeon.

Albertus Cotton, M.D.

Associate.

H. L. Rogers, M.D.

Urologist.

A. G. Rytina, M.D.

Assistant.

A. J. Gillis, M.D.

MEDICAL DIVISION.

Physicians.

William F. Lockwood, M.D.
Standish McCleary, M.D.
Cary B. Gamble, M.D
H. G. Beck, M.D.

Associates.

Hubert C. Knapp, M.D.
C. C. W. Judd, M.D.
Martin F. Sloan, M.D.
E. E. Mayer, M.D.
Bartus P. Baggott, M.D.
G. McLean, M.D.
J. W. Martindale, M.D.

Gastro-Enterologists.

Julius Friedenwald, M.D.

Associates.

T. Frederick Leitz, M.D.
Theodore Morrison, M.D.

Assistants.

Maurice Feldman, M.D.
Joseph Sindler, M.D.

Pediatrists.

John Ruhrah, M.D.
Edgar B. Friedenwald, M.D.

Associate.

Harry Goldberg, M.D.

Neurologist and Psychiatrist.

Andrew C. Gillis, M.D.

Assistants.

L. A. M. Krause, M.D.
Milford Levy, M.D.

Dermatologist.

Melvin Rosenthal, M.D.

OBSTETRICAL DIVISION.

Obstetricians.

Geo. W. Dobbin, M.D.
Charles E. Brack, M.D.

Associate Obstetricians.

E. P. Smith, M.D.
T. K. Galvin, M.D.

GYNECOLOGICAL DIVISION.

Gynecologists.

William S. Gardner, M.D
Abraham Samuels, M.D.
George A. Strauss, M.D.

Associate Gynecologists.

T. K. Galvin, M.D. E. P. Smith, M.D.

PATHOLOGICAL DIVISION.

Pathologist.

Standish McCleary, M.D.

Clinical Pathologist.

H. T. Collenberg, M.D.

Technicians—Sister M. Joan, Ph.G., R.N., Adelia Kelly, R.N.

DEPARTMENT OF DENTISTRY.

Attending Dentist.

Norval McDonald, D.D.S.

X-RAY DEPARTMENT.

Radiographers.

Albertus Cotton, M.D. Harry L. Rogers, M.D.

MERCY HOSPITAL—RESIDENT STAFF.

D. J. Pessagno, M.D., *Chief Resident.*

C. F. Foley, M.D.
J. E. Koplowitz, M.D.
C. G. McCoy, M.D.
A. R. Saporito, M.D.
Raymond Peters, M.D.
K. W. Golley, M.D.
Oscar G. Costa, M.D.
Thos Pereira, M.D.
E. Martinez, M.D.

DISPENSARY STAFF OF MERCY HOSPITAL.

Surgery.

Supervisors.

Alexius McGlannan, M.D. W. D. Wise, M.D.

Attending Surgeons.

A. M. Evans, M.D.
D. H. Mohr, M.D.
F. X. Kearney, M.D.
I. O. Ridgely, M.D.
O. H. Lloyd, M.D.
Clyde Marvel, M.D.
A. F. Hutchins, M.D.
Everard Briscoe, M.D.
H. B. McElwain, M.D.

Genito Urinary Surgery.

Supervisor, A. G. Rytina, M.D.

Attending Surgeons.

A. L. Tumbleson, M.D.
Harris Goldman, M.D.
H. C. Knapp, M.D.
A. J. Gillis, M.D.
J. F. Hogan, M.D.

Orthopedic Surgery.

Albertus Cotton, M.D.
Harry L. Rogers, M.D.

Medicine.

Supervisor, Wm. F. Lockwood, M.D.

Attending Physicians.

Martin F. Sloan, M.D.
Herman Seidel, M.D.
Wetherbee Fort, M.D.
B. T. Baggott, M.D.
L. A. M. Krause, M.D.
Edward Novak, M.D.

Diseases of Stomach.

Supervisor, Julius Friedenwald, M.D.

Attending Physicians.

T. Frederick Leitz, M.D.
Theodore H. Morrison, M.D.
M. Feldman, M.D.
Joseph Sindler, M.D.
M. Chideckel, M.D.
S. Zinberg, M.D.
A. Eisenberg, M.D.

Nervous Diseases.

Supervisor, A. C. Gillis.

Attending Physicians.

Milford Levy, M.D.
Geo. F. Sargeant, M.D.

Diseases of Women.

Supervisors.

W. S. Gardner, M.D.
A. Samuels, M.D.

Attending Surgeons.

E. P. Smith, M.D.
T. K. Galvin, M.D.
H. Palmisiano, M.D.
C. F. J. Coughlin, M.D.

Diseases of Nose and Throat.

W. F. Zinn, M.D.
R. F. McKenzie, M.D.

Diseases of Eye and Ear.

H. K. Fleck, M.D. M. Raskin, M.D.

Pediatrics.

Edgar B. Friedenwald, M.D.

I. J. Feingart, M.D. M. Ephraim, M.D.

M. Cumin, M.D.

Neuro-Otology.

J. W. Downey, Jr., M.D.

Proctology.

L. J. Rosenthal, M.D.

Dermatology.

Melvin Rosenthal, M.D.

Dental Clinic.

Norval McDonald, D.D.S. L. A. Walzak, D.D.S.

Social Service Department.

Katherine A. Monahan, R.N., *Director.*
Catherine Campbell, R.N., *Assistant.*
Clara E. Connery, R.N., *Chief Dispensary Nurse.*
Helen M. Moore.
Isabelle Bruton, *Register.*

Dispensary Directress.

Sister M. Helen, R.N.

THE JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF MARYLAND FOR CRIPPLED CHILDREN.

R. Tunstall Taylor, A.B., M.D., *Surgeon-in-Chief.*

Associate Surgeons.

Sydney M. Cone, A.B., M.D. Albertus Cotton, A.M., M.D.

Compton Riely, M.D.

Attending and Dispensary Surgeons.

W. H. Daniels, M.D. J. Albert Key, B.A., M.D.

E. Lewis Ardman, B.A., M.D.

Instructors in Corrective Gymnastics.

Miss Anita Renshaw Presstman. Miss Elizabeth Emory.

Miss Mary H. Lee, *Principal of School.*

Kindergartner and Industrial Teacher.

(To be appointed.)

Roentgenologists.

Henry J. Walton, M.D. J. F. Lutz, M.D.

Attending Plastic Surgeon.

John Staige Davis, B.Sc., M.D.

Attending Physician.

Benjamin Tappan, B.A., M.D.

Attending Surgeon.

A. M. Shipley, M.D.

Attending Neuro Surgeon.

Charles Bagley, Jr., M.D.

Attending Laryngolist.

F. B. Anderson, M.D.

Attending Dermatologist.

John R. Abercrombie, A.B., M.D.

Attending Pathologist.

Howard J. Maldeis, M.D.

Attending Urologist.

Gideon Timberlake, M.D.

Attending Oculist and Aurist.

William Tarun, M.D.

Attending Neurologist.

Irving J. Spear, M.D.

Attending Dentists.

G. E. P. Truitt, D.D.S. J. B. Bell, D.D.S.

Consulting Surgeons.

W. S. Halstead, A.B., LL.D., *B.Sc.*, M.D.
Randolph Winslow, A.M., M.D., LL.D.
J. M. T. Finney, A.B., M.D.
Archibald C. Harrison, M.D.

Consulting Physicians.

Thomas R. Brown, A.B., M.D.
Thomas B. Futcher, A.B., M.D.
Llewellys F. Barker, A.B., M.D.
William S. Thayer, A.B., M.D.

Consulting Oculist.

Hiram Woods, M.D.

Consulting Laryngoloist.

John N. MacKenzie, A.B., M.D.

Dispensary and Social Service Nurse.

Miss Mabel Brown, R.N.

Head Nurse.

Miss Ida Lachley, R.N.

STAFF OF THE CITY HOSPITALS AT BAYVIEW.

Thomas R. Boggs, S.B., M.D., *Physician-in-Chief.*

Arthur M. Shipley, M.D., *Surgeon-in-Chief.*

H. D. McCarty, M.D., *Physician-in-Chief to the Municipal Tuberculosis Hospital.*

Harry Goldsmith, M.D., *Physician-in-Charge of the City Detention Hospital for the Insane.*

John R. Cash, M.D., *Pathologist.*

Lawrence Getz, M.D., *Acting Pathologist in the Absence of Dr. Cash.*

CONSULTING STAFF.

Ophthalmologist.

James J. Mills, M.D.

Otologist.

William Tarun, M.D.

Gynecologist.

R. G. Willse, M.D.

Urologist.

W. H. Toulson, M.D.

Largynologists.

Frank Dyer Sanger, M.D.
H. R. Slack, M.D.

Pediatrician.

John Ruhrah, M.D.

Neurologist.

Henry M. Thomas, M.D.

Psychiatrists.

Henry J. Berkeley, M.D.
Adolph Meyer, M.D.

Assistant Visiting Physician.

Charles R. Austrian, M.D.

Assistant Visiting Surgeon.

Frank S. Lynn, M.D.

STAFF OF NURSERY AND CHILD'S HOSPITAL.

Attending Physicians.

Edgar B. Friedenwald, M.D.
Israel Feinglos, M.D.

Surgeons.

Thomas R. Chambers, M.D.
F. L. Jennings, M.D.

Opthalmologist and Otologist.

Harry Friedenwald, M.D.

Laryngologist and Rhinologist.

M. L. Breitstein, M.D.

Orthopedist.

William Nachlas, M.D.

Interne.

Frederick Dart.

Superintendent.

Miss George Allen Hutton.

Assistant Superintendent.

Miss Margaret Collison.

ST. VINCENT'S INFANT ASYLUM.

Visiting Physicians.

Charles O'Donovan, A.M., M.D.
Charles P. Clautice, M.D.
Charles L. Summers, M.D.
Charles R. Goldsborough, M.D.
T. F. White, M.D.

Visiting Surgeon.

Alexius McGlannan, M.D.

Visiting Oculists and Aurists.

J. Frank Crouch, M.D.
Clyde A. Clapp, M.D.

Visiting Orthopedic Surgeon.

Compton Reilly, M.D.

Visiting Proctologist.

G. Milton Linthicum, *A.M.*, *M.D.*

Pathologist.

Sydney M. Cone, A.M., M.D.

MATRICULATES, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, 1921-1922.

POST-GRADUATES AND SPECIAL STUDENTS.

Name	State
Barnes, Harry A., M.D.	Maryland
Benson, Frank L., M.D.	Pennsylvania
Bowers, Ralph C., M.D.	Maryland
Burton, Frank J., M.D.	Utah
Cahn, Charles A., M.D., D.D.S.	Maryland
deCaesar, Dominick Joseph	New York
Cousins, John Andrew	Maryland
Craig, Branch, M.D.	Texas
Enser, C. B., M.D.	Maryland
Foxwell, Raymond K., M. D.	D. C.
Hawkins, Vallie, M.D.	Pennsylvania
Holroyd, Frank F., M.D.	West Virginia
King, W. P.	North Carolina
Krieger, Emanual, D.D.S.	Maryland
Meintzberger, Gilbert Stephen	Maryland
Moore, Donald Bain, M.D.	North Carolina
Norman, John Standing, M.D.,	North Carolina
Patterson, R. D., M.D.	North Carolina
Preston, D. G., M.D.	Virginia
Shepard, Gertrude	Georgia
Williams, Timothy Graham, M.D.,	North Carolina

FOURTH YEAR CLASS.

Name	State
Bailey, Harry, A.B.	Connecticut
Buchness, Anthony V., A. B.	Maryland
Champe, Jr., Ira Preston	West Virginia
Doshay, Louis Jacob, A.B.	New York
Fleischmann, Berthold, B. S.	New York
Freidus, Elias	New York
Fritz, Julius Dudley	New York
Fulton, William James	Maryland
Ginsberg, William, A.B.	New York
Goldmann, Bernhard Alexander,	Pennsylvania
Gollick, William A., B. S.	New Jersey
Gordon, Elias, B.S.	Pennsylvania
Gordon, Herbert	New York
Greenbaum, Leonard Harry	Maryland
Groff, Morris	New York
Halley, George Conrad	Idaho
Harman, Robert Dove, B.S.	West Virginia
Hatfield, Daniel S.	West Virginia
Heitsch, Hubert M.	Michigan
Hollister, William, B. S.	North Carolina
Horowitz, Herman Jack, B. S.,	New York
Huff, William, A.B.	Virginia
Ingram, David N.	Maryland
Keefe, George G., A. B.	Connecticut
Kerdasha, George S.	New Jersey
Krager, John J., A.B.	Maryland
Kunkowski, Andrew	Maryland
Lang, Milton Charles	Maryland
Lawson, Lawrence Wells, A.B.,	West Virginia
Linke, James Julian Paul, B. S.,	New Jersey
McCoy, C. Glen, A. B.	West Virginia
Mercier, Albin Scott, A. B.	Maryland
Middlemiss, Wm. Robert, B. S.	Utah
Monninger, Arthur Cecil	Pennsylvania
Morgan, Edward Nicholas	New York
Noll, Louis, B. S.	Connecticut
O'Connor, John Andrew, A. B.	Maryland
Payne, John Edward, B. S.,	West Virginia
Peters, H. Raymond, B. A.	Maryland
Pittman, Henry Lee	North Carolina
Pullen, Guy Foote	Connecticut
Rhodes, Bricey Milton	Florida
Rudisill, John David, A. B.,	North Carolina
Salzberg, Abraham Hellman	New York
Saporito, Archibald R.	New Jersey
Sekerak, Arthur Joseph Francis,	Connecticut
Shannon, George Edmon	Maryland
Shapin, Sydney	New York
Shapiro, Louis Mendelsohn, B. A.,	Connecticut
Sternberg, Harry Melmuth	New York
Stovin, Joseph Samuel, Ph. B.,	Connecticut
Stout, Philip David, B. A.	Tennessee
Sweet, Samuel Waterman, B. S.,	New York
Trynin, Aaron H., B. A.	New York
Warfield, Jr., John Ogle, A. B.,	Pennsylvania
Wilson, Thomas Norwood, A. B.,	Maryland

THIRD YEAR CLASS.

Name	State
Beck, Nathaniel M., A. B.	Maryland
Berkson, Morris I.	Pennsylvania
Bowers, Jr., Thaddeus R., A.B.,	North Carolina
Clapham, Roger E., B.S.	West Virginia
Cortese, Anthony Edward	New Jersey
Dart, Frederick Bond	Connecticut
Desane, Joseph	New York
Edmonds, John Milton	Michigan
Fleshman, Dewey Lynwood, B.S.,	West Virginia
Goldberg, Ben	New York
Gordon, Abraham S.	New York
Giffin, Theodore Clifton, B.S.,	West Virginia
Grose, Robt. Glenn, B.A.	North Carolina
Groves, Robt. B., B.A.	North Carolina
Gutowski, Joseph Matthew	New Jersey
Hagerman, Paul	West Virginia
Harp, J. Elmer	Maryland
Hirsch, Philip	New York
Hundley, Jr., John T. T., A. B.	Virginia
Hunt, William Bryce, B.A.,	North Carolina
Jennette, William Carl, A.B.,	North Carolina
Keith, Marion Yates	North Carolina
Knipp, George A.	Maryland
Kraut, Arthur Milton	New Jersey
Kyper, Frederick T.	Pennsylvania
Lally, Leo Aloysius	Pennsylvania
Long, Ira C., A. B.	North Carolina
Love, Jr., William Samuel, B.A.,	Maryland
McCullough, Carlton S. L., B.S.,	Pennsylvania
McLean, Herbert E., B.A.	New Jersey

Name	State
Moler, Raleigh M., B.S.	West Virginia
Murray, Robert Lebby, B.S.,	North Carolina
Myers, Karl Johnson, B.S.	West Virginia
Newcomer, David R., B.S.	Maryland
Newcomer, Ward E., B.S.	Pennsylvania
Parson, Willard Sigsbee	Pennsylvania
Peterman, James Elmer	Pennsylvania
Pondfield, Louis F., B.A.	Maryland
Pontery, Herbert	New Jersey
Povalski, Alexander William	New Jersey
Prather, Fonzo Goff, B.S.	West Virginia
Rothfuss, Paul A., B. S.	Pennsylvania
Ruche, Harry Charles	Pennsylvania
Saurborne, Sylvia M. B., B.S.,	West Virginia
Schorr, Richard	New York
Shealy, Walter Hal, B. A.	South Carolina
Sherman, Louis	New York
Smith, Charles Franklin	Pennsylvania
Snaith, Theresa Ora	West Virginia
Sowers, Roy Gerald, B.S., M.A.,	North Carolina
Steincrohn, Peter Joseph	Connecticut
Sussman, Abram Allen, D.D.S.	Maryland
Touhey, Thomas Joseph	Delaware
Walker, William Wallace, B.S.,	West Virginia
Wasserstrom, Sidney	New York
Weinert, Henry V.	New Jersey
Welton, William Archibald, B.S.,	West Virginia
Werner, Walter I.	Ohio
White, Francis Willard Moody, B.A.,	North Carolina
White, James Franklin, B.S.,	West Virginia

SECOND YEAR CLASS.

Name	State
Allen, Moore Lowry	Utah
Anderson, Albert Louis	Maryland
Antonius, Nicholas A.	New Jersey
Barnes, D. Keith	Utah
Bartlett, Jr., Charles Wm.	Florida
*Bershatsky, William	New York
Boyd, Kenneth Beay	Maryland
Briglia, Nicholas Natale	Pennsylvania
Carter, Carl John	West Virginia
Edelman, Edward Isidor	New York
Fisher, Harry Richard	New York
Flax, Ira Isador	New Jersey
Frehling, Joseph Morris	Kentucky
Friedman, Bernard	New York

Name	State
Friedman, Irving	New Jersey
Gattens, Wilber Elton, B.S.	Maryland
**Gottlieb, Bernard Norman	New York
Granoff, Joseph F.	New York
Greifinger, Marcus Harry	New Jersey
Grossblatt, Philip	New Jersey
Howell, Clewell, B. S.	North Carolina
Jacobson, Philip	Maryland
Knox, Joseph Clyde	North Carolina
Koons, Earle Weant, B. S.	Maryland
Kratz, Fred William	Maryland
Leibensperger, George F.	Pennsylvania
Levine, Samuel	New Jersey
Marsh, James T., A. B.	Maryland

*Note—Not in attendance.

SECOND YEAR CLASS—Continued.

Name	State
Marton, Samuel	New York
Maseritz, Isidore	Maryland
Maurillo, Dominick Francis, A.B.,	New York
Megahan, Burke	Pennsylvania
Messinger, Benjamin	New York
Miller, Benjamin	Maryland
Miller, Jacob M.	Maryland
Miller, Joseph G.	Maryland
Monroe, Clement R.	North Carolina
Moriarty, Louis	Connecticut
Morris, Philip	New York
Morrison, Jr., William Henry,	Pennsylvania
McLane, William Oliver, Jr., B.S.,	Maryland
McClosky, William Thomas,	District of Columbia
Nash, Alexander E.	New Jersey
Nelson, James Wharton, A. B.	Maryland
Neustaedter, Theodore M.	New York
Nocera, Domingo	Porto Rico
Norment, John E., A. B.	Maryland
Pachtman, Isadore	Pennsylvania
Perry, Arch. H.	North Carolina
Pitkowsky, Louis K.	New York
**Sarubin, Benjamin	Maryland
Scagnetti, Albert	New York
Scheindlinger, Morris I.	New York
Schlenger, Leo Brenner	New Jersey
Schultz, Louis Ariel	New York
Scimeca, Antonio Adolfo	New York
Seliger, Robert V.	New York
Shapiro, Ralph N.	New Jersey
Tabershaw, Arnold Leon	New York
Theuerkauf, Frank Joseph	Pennsylvania
Urbanski, Adrian Xavier	New Jersey
Weiner, Hymen L.	Pennsylvania
Weinstock, Alex. A.	New York
Whaley, Thomas Bravard	Maryland
Woodyard, Edwin Sayre	West Virginia
Zaslow, John	New York

FIRST YEAR CLASS.

Balcerzak, Stanley Paul	Pennsylvania
*Brender, Max	New York
Bentz, Felix	Connecticut
Brown, Leo T.	District of Columbia
*Burke, E. N.	Kentucky
Cadle, William Rodman	Maryland
Cantor, Nathan	Connecticut
*Callahan, J. J.	
Carder, Joe R.	West Virginia
Cardinale, P. F.	New Jersey
*Casey, Calvert E.	Rhode Island
Cassidy, John J., B.S.	Delaware
Clahr, Abraham Albert	New York
Coonan, Jr., Thos. J., A.B.	Maryland
Coe, John M.	Dist. of Columbia
*Coffindaffer, R. S.	West Virginia
Cope, Arthur Alexander, A.B.,	Pennsylvania
Davis, Norvel R.	Maryland
**Davidov, Benjamin	Maryland
**Davidson, Meyer	Maryland
Demely, Louis Alvin	Maryland
De Vincentis, Henry	New Jersey
**Diffenderffer, Robert Tinley,	Pennsylvania
Donohoe, Edward C., A.B.	Pennsylvania
*Donovan, Charles Michael	Connecticut
Draper, Leonidas McFerren, B.A.,	North Carolina
Dreskin, Jacob L.	New Jersey
Dwyer, D. R., A.B.	Connecticut
Elgin, Lee William	Maryland
Ellis, Francis A., A.B.	Maryland
Epstein, Harry Herman	New York
*Ehrenreich, Isaac, B.S.	Maryland
Everett, Franklin A.	Pennsylvania
Fancher, Jr., H. Wilson	Connecticut
Farber, Raphael	Pennsylvania
**Ferrara, James	New York
Fields, Abijah Clements	Alabama
Fine, Morris Aaron	Maryland
Finnell, Reuben Ashford	Maryland
Fischman, Harold	New Jersey
Fishof, Frank	New York
Fuchs, Abner	New York
Gale, Louis Harry	Pennsylvania
Gaston, William Bryan	West Virginia
**Geraghty, Francis J., B.A.	Maryland
*Glickel, Henry	New York
Grandfield, Robert Francis	Rhode Island
*Greenwald, M.	New York
Grimm, Jr., Wilson O.	West Virginia
Gross, Sigmund	New York
**Hale, Elwin Faulconer	Virginia
Herbert, Alpha Nathan	New Jersey
Hertz, Ben	New York
Hibbitts, John Thomas	Maryland
Hulla, Jaroslav	Maryland

*Note—Not in attendance.

**Note—Not in attendance entire session.

FIRST YEAR CLASS—Continued.

Name	State
Jacobs, Morris Albert	Maryland
Keating, John Patrick	Connecticut
**Kelly, Allen Wilbur	Maryland
Kiesel, Henry	New York
Knotts, W. K.	Maryland
Lalley, Paul Francis	Pennsylvania
Laus, Edward Raymond	New York
Linde, S. Arthur	Maryland
London, Daniel	New York
Lopatin, Samuel	Connecticut
Lowe, Claude Milton	Pennsylvania
Marciniak, Edward Stanley	New Jersey
Merchant, Harry McCreary, B.S.,	Florida
Metsky, Joseph	New Jersey
Miller, Edgar Raymond, A.B.,	Pennsylvania
Minnefor, Chas. A.	New Jersey
*Mitchell, Charles Archie, A.B.	Maine
Molina, Rafael Rodriguez	Porto Rico
Morales, Jaime Vila	Porto Rico
Mullenusky, Joseph John	Pennsylvania
Nataro, Joseph	New Jersey
Nimaroff, Meyer	New Jersey
Nock, Randolph Maxwell	Maryland
**Norment, Clinton Crawford	Maryland
Orton, Lyman R.	Massachusetts
Oshrin, Henry	New Jersey
Pearrell, Ernest H.	Maryland
Pierce, James Lewis	Florida
Pinsky, Myer Mordecai	New Jersey
Plassnig, Edwin, B.S.	Maryland
Polizzotti, Joseph L.	New Jersey
Poplack, Samuel Lewis	Connecticut
Pulaski, Leo Edward	Pennsylvania
**Pullen, Lawrence Homer	Maryland
Radest, Louis	New York
Rathsprecher, Isadore	New Jersey
**Resh, George Daniel, A.B.	Maryland
**Rezek, George Jaroslav	Maryland
*Rosenberg, H. S.	New York
Rosenstein, Jacob	New York
Rocco, Frank	New Jersey
Sarnoff, Jack	New York
Schachter, Eugene Joel	Pennsylvania
*Schilling, A. B.	New Jersey
Seiken, George	New York
Silverstein, Jacob Maurice	New Jersey
Simon, Joseph R.	Pennsylvania
**Smith, Jr., James Bathurst, B.S.,	Virginia
**Skilling, Francis C.	Maryland
Sinton, William Allen	Virginia
Straka, Robert Paul	Pennsylvania
Sulman, William R.	Pennsylvania
*Sweeney, Jr., J. J.	Maryland
Tomainoli, M. F.	New Jersey
Turner, Thomas Bourne, B.S.	Maryland
Visconti, Joseph A.	New Jersey
Wallace, Erwin Basse	Maryland
Wasserweig, Martin Max	Pennsylvania
Webb, Elmore Miller	Maryland
Wiener, Joseph	New York
Weintraub, Harry	Maryland
**Wietzen, Samuel	New York
Zimmerman, Charles C.	Maryland

*Note—Not in attendance.

**Note—Not in attendance entire session.

GENERAL SUMMARY OF STUDENTS ATTENDING THE UNIVERSITY OF MARYLAND, SESSION OF 1921-22.

College of Home Economics	17
College of Agriculture	190
College of Engineering	164
College of Arts and Sciences	198
College of Education	72
The Graduate School	23
The Summer School, 1921	380
School of Medicine	299
School of Law	490
School of Dentistry	204
School of Pharmacy	93
School of Commerce	240
School of Nurses	69
Extension Courses	75
Total	2514

GRADUATES, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS,

JUNE 1, 1922.

Name	State
Bailey, Harry, B.A.	Connecticut
Buchness, Anthony V., A.B.	Maryland
Champe, Jr., Ira Preston	West Virginia
Doshey, Louis Jacob, B.A.	New York
Fleischmann, Berthold, B.S.	New York
Freidus, Elias	New York
Fritz, Julius Dudley	New York
Fulton, William James	Maryland
Ginsberg, William, B.A.	New York
Goldmann, Bernhard Alexander,	Pennsylvania
Gollick, William A., B.S.	New Jersey
Gordon, Herbert	New York
Greenbaum, Leonard Harry	Maryland
Groff, Morris	New York
Hatfield, Daniel S.	West Virginia
Halley, George Conrad	Idaho
Harman, Robert Dove, B.S.,	West Virginia
Heitsch, Herbert M.	Michigan
Hollister, William, B.S.	North Carolina
Horowitz, Herman Jack, B.S.,	New York
Huff, William, B.A.	Virginia
Ingram, David N.	Maryland
Keefe, George G., A.B.	Connecticut
Kerdasha, Geo.	New Jersey
Krager, John J., B.A.	Maryland
Kunkowski, Andrew	Maryland
Lang, Milton Charles	Maryland
Lawson, Lawrence Wells, B.A.,	West Virginia
Linke, Julian P.	New Jersey
McCoy, C. Glen, A.B.	West Virginia
Mercier, Albin Scott, A.B.	Maryland
Middlemiss, Wm. Robert, B.S.	Utah
Monninger, Arthur C.	Pennsylvania
Morgan, Edward Nicholas	New York
O'Connor, John Andrew, A.B.	Maryland
Noll, Louis, B.S.	Connecticut
Payne, John Edward, B.S.	West Virginia
Peters, H. Raymond, B.A.	Maryland
Pittman, Henry Lee	North Carolina
Pullen, Guy Foote	Conecticut
Rhodes, Bricey Milton	Florida
Rudisill, John David, A.B.,	North Carolina
Salzberg, Abraham	New York
Saporito, Archibald R.	New Jersey

GRADUATES—Continued.

Name	State	Name	State
Sekerak, Arthur Joseph Francis,	Connecticut	Stovin, Joseph Samuel, Ph.B.	Connecticut
Shannon, George Edmon	Maryland	Stout, Philip David, B.A.	Tennessee
Shapin, Sydney	New York	Sweet, Samuel Waterman, B.S.,	New York
Shapiro, Louis Mendelsohn, B.A.,	Connecticut	Trynin, Aaron H., B.A.	New York
Sternberg, Harry Melmuth	New York	Warfield, Jr., John Ogle, A.B.,	Pennsylvania
		Wilson, Thomas Norwood, A.B.	Maryland

PRIZEMEN.

University Prize—Gold Medal	J. Ogle Warfield, Jr.
Certificate of Honor	C. Glen McCoy.
Certificate of Honor	H. Raymond Peters,
Certificate of Honor	A. V. Buchness.
Certificate of Honor	Elias Freidus.
Certificate of Honor	T. Norwood Wilson.

In the third year the Jose L. Hirsch Memorial Prize of $50.00 was awarded to Henry V. Weinert for the best work in Pathology during the second and third years.

THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE
AND
COLLEGE OF PHYSICIANS AND SURGEONS.

As a result of the merger accomplished in 1915 the combined schools offer the student the abundant resources of both institutions, and, in addition, by earlier combination with the Baltimore Medical College, the entire equipment of three large medical colleges.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. It was chartered in 1807, under the name of the College of Medicine of Maryland, and its first class was graduated in 1810. In 1812 the College was empowered by the Legislature to annex three other colleges or faculties, of Divinity, of Law, and of Arts and Sciences, and the four colleges thus united were "constituted an University by the name and under the title of the University of Maryland."

Established thus for more than a century, the School of Medicine of the University of Maryland has always been a leading medical college, especially prominent in the South and widely known and highly honored throughout the country.

The beautiful college building at Lombard and Greene Streets, erected in 1814-1815, is the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837), and here were first installed independent chairs for the teaching of Diseases of Women and Children (1867) and of Eye and Ear Diseases (1873).

The School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for the senior student was first established.

In 1913 juncture was brought about with the Baltimore Medical College, an institution of 32 years' growth. By this association the facilities of the School of Medicine were enlarged in faculty, equipment and hospital connection.

The College of Physicians and Surgeons was incorporated under the Legislative enactment in 1872, and established on Hanover Street in a building afterwards known as the Maternité, the first obstetrical hospital in Maryland. In 1878 union was effected with the Washington University School of Medicine, in existence since 1827, and the College was removed to its present location at Calvert and Saratoga Streets. By this arrangement, medical control of the City Hospital, now the Mercy Hospital, was obtained, and on this foundation in 1899 the present admirable college building was erected.

CLINICAL FACILITIES.

HOSPITALS AND DISPENSARIES.

UNIVERSITY HOSPITAL.

The University Hospital, which is the property of the University of Maryland, is the oldest institution for the care of the sick in the State of Maryland. It was opened in September, 1823, under the name of the Baltimore Infirmary, and at that time consisted of but four wards, one of which was reserved for eye cases. By successive additions this hospital was increased to more than fourfold its original accommodations, there being added to it a large clinical amphitheatre, a students' building for the accommodation of the thirty clinical assistants, and a nurses' building for the accommodation of the pupils of the Training School for Nurses. The yearly increase in the number of patients seeking admission to the hospital, however, more than kept pace with the increase in accommodations, and the Faculty therefore erected an entirely new and modern hospital of fully double the capacity of the former building.

The University Hospital is constructed of brick and Tennessee limestone in the Colonial style of architecture, fronting 175 feet upon Lombard Street, and about the same on Greene Street. It is supplied with the most modern and approved system of heat-ing, ventilation, etc., and equipped with all modern requirements and conveniences for the care of the sick, and for the clinical instruction of the students of the University.

It is one of the largest and finest hospitals owned and controlled by any medical school in America, and in point of architectural beauty, convenience and completeness of arrangements and equipment compares favorably with other hospitals.

An important adjunct to the hospital is the postmortem building, which is constructed with special reference to the instruction of students in pathological anatomy.

The hospital is situated opposite the University building, so that the student loses no time in passing from the lecture halls to the clinical amphitheatre, dispensary and wards.

A portion of the hospital is used as a marine hospital for foreign seamen. The great importance of Baltimore as a shipping point brings into her harbor many vessels from all parts of the world, and the sick sailors who are cared for in the wards of the institution give the students an opportunity to observe a large variety of diseases. Another considerable portion of the building is used as a Municipal Hospital, and contains charity beds supported by the City of Baltimore. This department of the hospital is taxed to its utmost capacity to afford accommodations for the patients seeking admission.

Owing to its location, being the nearest hospital to the largest manufacturing district of the city, the University Hospital receives for treatment a very large number of accident cases of all kinds, both slight and serious. These cases, as well as patients suffering from the various diseases of our own climate, occupy the beds, and add greatly to the facilities of clinical teaching enjoyed by the school. The facilities for clinical instruction have been greatly enlarged by an appropriation by the State of Maryland for the support of free beds for patients from the various counties.

MERCY HOSPITAL.

The Sisters of Mercy first assumed charge of the Hospital at the corner of Calvert and Saratoga streets, then owned by the Washington University, in 1875. By the merger of 1878 the Hospital came under the control of the College of Physicians and Surgeons, but the Sisters continued their work of administering to the patients.

In a very few years it became apparent that the City Hospital, as it was then called, was much too small to accommodate the rapidly growing demands upon it. However, it was not until 1888 that the Sisters of Mercy, with the assistance of the Faculty of the College of Physicians and Surgeons, were able to lay the cornerstone of the present Hospital. This building was completed and occupied late in 1889. Since then the growing demands for more space has compelled the erection of additions, until now there are accommodations for 351 patients.

In 1909 the name was changed from The Baltimore City Hospital to Mercy Hospital.

Mercy Hospital is located in the center of a city of 750,000 inhabitants, and is under the exclusive medical control of the College of Physicians and Surgeons. It adjoins the College building, and all surgical patients from the public wards are operated upon in the College operating rooms. This union of the Hospital and College buildings greatly facilitate the clinical teaching, as there is no time lost in passing from one to the other.

Mercy Hospital is the hospital of the United Railways and Electric Company of Baltimore City, and receives patients from the Baltimore & Ohio Railroad Company and from the Pennsylvania Railroad Company and its branches.

FRANKLIN SQUARE HOSPITAL.

The Franklin Square Hospital has a capacity of 112 beds. During the year ending December 31, 1920, 1,860 cases were treated in the hospital, and 1,896 patients were treated in the dispensary. Eleven hundred and forty-eight surgical operations were performed in the hospital.

LYING-IN HOSPITALS.

MATERNITY HOSPITAL OF THE UNIVERSITY OF MARYLAND.

This institution is also the property of the University, and under its exclusive control and direction, and is conducted with the special purpose of furnishing actual obstetrical experience to each member of the graduating class.

New accommodations have been provided in the general hospital, and the Maternity Department now offers better facilities than ever before, while the large increase in clinical material has made it possible to offer excellent opportunities for post-graduate work.

THE WEST END MATERNITY.

The West End Maternity adjoins the Franklin Square Hospital and furnishes an abundance of clinical material, which is under the control of the Faculty of Physic.

OUT-PATIENT CLINIC AND DISPENSARY.

In connection with the University Hospital an out-door obstetrical clinic is conducted, in which every case has careful prenatal supervision, is attended during labor by a graduate physician and graduate nurse—one senior student also being present—and is visited during the puerperium by the attending student and graduate nurse. Careful prenatal, labor and puerperal records are kept, making this work of extreme value to the medical student, not only from the obstetrical standpoint, but in making him appreciate the value of social service and public health work.

NUMBER OF PATIENTS.

During the year ending December 31, 1921, the number of patients treated in the Lying-In hospitals connected with the School was as follows:

Number of Confinements in Hospitals	371
Number of Confinements Out-Patient Department	801
Average number of cases seen by each student of the graduating class	15

THE MUNICIPAL HOSPITALS—BAY VIEW.

The clinical advantages of the University have been largely increased by the liberal decision of the Board of Supervisors of City Charities to allow the immense material of these hospitals to be used for the purpose of medical education. There are daily visits and clinics in medicine and surgery by the Staff of the hospitals. The autopsy material is unsurpassed in this country in amount, thoroughness in study, and the use made of it in medical teaching.

The Municipal Hospitals consist of the following separate hospitals:

The General Hospital, 160 beds.
The Hospital for Chronic Cases, 88 beds.
The Municipal Hospital for Tuberculosis, 190 beds.
City Detention Hospital for Insane, 450 beds.

THE JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF MARYLAND FOR CRIPPLED CHILDREN.

This institution contains seventy-five beds for the active treatment of deformities. It is situated at "Radnor Park," a colonial estate of seventy-five acres at Hillsdale, within the western city limits, reached by trolley.

This institution has city, state, endowed and private beds and every modern facility for the treatment of orthopedic cases as well as a most beautiful park-like environment and farm, and is closely affiliated with the University of Maryland, for bed-side instruction.

ST. VINCENT'S INFANT ASYLUM.

The facilitiess of this institution, containing 250 infants and children, have been kindly extended to the University of Maryland by the Sisters of Charity. This large clinic enables this school to present to its students liberal opportunities for the study of diseases of infants and children.

INSTITUTIONS FOR THE TREATMENT OF THE INSANE AND FEEBLE-MINDED.

THE SHEPPARD AND ENOCH PRATT HOSPITAL FOR THE INSANE. This institution is one of the most modern hospitals for the treatment and care of the insane in this country. It is well endowed and its superintendent is R. M. Chapman, M. D., Professor of Psychiatry at the University of Maryland. In this hospital intensive treatment and study of mental diseases is carried on, a large number of the patients entering voluntarily. The students under the direction of Dr. Chapman and his assistants in a series of clinics are shown the early manifestations and the various stages of mental diseases, the methods of treatment, and their effects.

MOUNT HOPE RETREAT FOR THE INSANE. This hospital contains an average of 750 patients and is attended by Dr. Chas. G. Hill, Professor of Psychiatry of this faculty. Under the direction of Dr. Hill and his assistants the students are given opportunity for the study of large groups of patients showing all phases of various mental and nervous disorders.

DISPENSARIES.

The dispensaries associated with the University Hospital and the Mercy Hospital are organized upon a uniform plan in order that the teaching may be the same in each. Each dispensary has the following departments: Medicine, Surgery, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopedics, Proctology, Dermatology, Throat and Nose, Tuberculosis and Psychiatry.

All students in their junior year work in the departments of Medicine and Surgery each day in one of the dispensaries.

All students in their senior year work in the special departments one hour each day.

Some idea of the value of these dispensaries for clinical teaching is shown by the number of patients treated. For the year 1921 about eighty-four thousand visits were made to the dispensaries.

In addition to these the Dental Department, situated upon the grounds of the University, conducts a daily clinic which is open to medical students.

University Hospital Dispensary Report, January 1 to December 31, 1921.

J. A. Skladowsky, M.D., Dispensary Physician.

Department.	*New Cases.*	*Old Cases.*	*Total.*
Dermatological	2,437	5,533	7,970
Children	1,912	10,142	12,054
Obstetrical	1,406	3,617	5,023
Surgical	1,292	3,425	4,717
Eye and Ear	1,090	2,273	3,363
Gynecological	1,842	3,990	5,832
Medical	1,066	2,264	3,330
Genito-Urinary	544	3,126	3,670
Neurological	169	1,574	1,743
Orthopedics	139	1,594	1,733
Gastro-Enterological	185	883	1,068
Nose and Throat	721	845	1,566
Tuberculosis	169	158	327
Proctological	85	127	212
Psychiatry	14	15	29
	13,071	39,566	52,637

Mercy Hospital Dispensary Report, January 1 to December 31, 1921.
Sister M. Helen, R.N., Directress.

Dispensary Clinics.	*New Cases.*	*Old Cases.*	*Total.*
Surgical	933	2,530	3,463
Medical	918	816	1,734
Gynecological	339	753	1,092
Eye and Ear	420	680	1,100
Nose and Throat	516	783	1,299
Neurological	179	543	722
Pediatric	85	61	146
Gastro-Intestinal	207	897	1,104
Dental	60	18	78
Proctological	42	24	66
Orthopedic	88	298	386
Dermatological	271	572	843
Genito-Urinary Surgery	1,681	17,910	19,591
	5,739	25,885	31,624

LABORATORIES.

ANATOMICAL LABORATORIES.

These laboratories are in charge of the Professor of Anatomy and his assistants. The University has recently built its own storage and embalming plant, which supplies an abundance of anatomical material. Anatomical material is furnished in abundance, free of charge.

LABORATORY OF EXPERIMENTAL PHYSIOLOGY.

This laboratory occupies the first floor of Gray Laboratory; it includes a large student laboratory, with capacity of forty students, a room completely equipped for mammalian experimentation, a stock-room, and an office for the professor in charge. Within the same building there is an animal room in which there is kept a constant supply of material for experimentation and demonstration. The laboratory is equipped with ample apparatus: there is a complete set of student apparatus available for each group of two students, while the special apparatus for laboratory experimentation and class-room demonstration is adequate for the needs of the courses.

LABORATORY OF BIOLOGICAL CHEMISTRY.

(See page 55.)

LABORATORY OF HISTOLOGY AND EMBRYOLOGY.

This laboratory is fully equipped for teaching Histology and Embryology.

There is a large collection of charts, specimens and apparatus used in teaching. The necessary equipment for the practice of technique is provided.

LABORATORIES OF PATHOLOGY AND BACTERIOLOGY.

The subject of special bacteriology is taught during a portion of the second year in a well equipped laboratory containing sterilizers, water baths, and other necessary equipment for this purpose.

The subject of histopathology is also taught during the second year in a properly equipped laboratory. The details concerning this work are described under the subject of Department of Pathology and Bacteriology.

The instruction in gross pathology is obtained during the third year by attendance upon the autopsies at the University Hospital and the Mercy Hospital, and special instruction in this subject is also given by demonstrations with a large amount of pathological material at the City Hospitals situated at Bay View. The subject of gross pathology is also taught in the third year by means of lectures and demonstrations to sections of the third year class and a special effort is made to apply this subject to the explanation of the symptoms and clinical signs of disease. The instruction in autopsy technique is also given personally to small groups of students.

LABORATORIES OF CLINICAL PATHOLOGY.

These laboratories are fully equipped for the study of practical laboratory work in its relationship to clinical medicine. Each student is supplied with a locker, containing sufficient apparatus for any ordinary examination.

The wards and out-patient departments of the hospitals furnish an abundance of material for study.

By reason of individual equipment, much work outside of class hours is expected of the student.

The class rooms are adequately lighted, and are conveniently situated for teaching purposes.

LIBRARIES.

The University Library, founded in 1813 by the purchase of the collection of Dr. John Crawford, now contains 14,610 volumes, a file of 58 current journals, and several thousand pamphlets and reprints. During the year ending December 31, 1921, 351 volumes were added. It is well stocked with recent literature, including books and periodicals of general interest. The home of the Library is Davidge Hall, a comfortable and commodious building in close proximity to the class rooms and the laboratories of the Medical Department. The Library is open daily during the year, except in August, for use of members of the Faculty, the students, and the profession generally.

The Library of the Medical and Chirurgical Faculty of Maryland, containing many thousands of volumes, is open to the students of the school. The leading medical publications of the world are received by the library and complete sets of many journals are available. Other libraries of Baltimore are the Peabody (181,000 volumes) and the Enoch Pratt Free Library (355,817 volumes).

All these libraries are open to the students of the school without charge.

The proximity of Washington places the immense libraries of the national capital at the disposal of the students of the school.

ANNUAL APPOINTMENTS.

On February first of each session the following annual appointments are made from among the graduates of the school:

TO THE UNIVERSITY HOSPITAL

- Medical Superintendent.
- Five Senior Residents, viz:
  - Two Resident Surgeons.
  - One Resident Physician.
  - One Resident Gynecologist and Obstetrician.
  - One Resident Pathologist.
- Thirteen Junior Residents on a rotating service.

A number of students are appointed each year, at the close of the session, as Clinical Assistants in the University Hospital for the summer months.

TO THE MERCY HOSPITAL.

Chief Resident Physician.
Six Resident Surgeons.
Four Resident Physicians.
One Resident Gynecologist.
One Resident Obstetrician.

TO THE MARYLAND GENERAL HOSPITAL.

Medical Superintendent:
Four Senior Residents, viz:
  One Resident Surgeon.
  One Resident Physician.
  One Resident Gynecologist.
  One Resident Obstetrician.
Eight Junior Residents on a rotating service.

Each resident serves a term in every department, including the pathological laboratory and the Maryland Lying-in-Hospital.

Many appointments to other hospitals of Baltimore are made annually, to which graduates of this school are eligible.

REQUIREMENTS FOR MATRICULATION.

Admission to the course in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland. This certificate is obtained from the Registrar on the basis of satisfactory credentials, or by examination and credentials, and is essential for admission to any class.

The requirements for the issuance of the Medical Student Certificate are:

(a) The completion of a standard four-year high school course or the equivalent, and in addition,

(b) Two years or sixty semester hours of college credits, including chemistry, biology, physics, and English.

Women are admitted to the Medical Department of this University.

(A) DETAILS OF THE HIGH SCHOOL REQUIREMENT.

1. Graduation from an accredited high school after pursuing a four-year course based upon an eight-year elementary course or its full equivalent; or

2. Successfully passing entrance examinations in the following subjects:

(*a*) *Required Eleven* (11) *Units.*

	Units.
English, 4 years	3
Elementary and Intermediate Algebra	1
Plane Geometry (first five books)	1
Two years of a foreign language	2
Two of the three sciences—Biology, Chemistry, Physics	2
American History and Civics	1
Ancient History or English History	1

(*b*) *Electives, Four* (4) *Units.*

(1) History and Political Science:	
Ancient History or English History	1
Mediaeval and Modern History	1 or ½
General History	1 or ½
Civics	½
Economics	½
(2) Language:	
French 2 years	2
German 2 years	2
Greek 2 years	2
Hebrew 2 years	2
Italian 2 years	2
Latin 1 or 2 years	1 or 2
Spanish 2 years	2
(3) Mathematics:	
Advanced Arithmetic	½
Advanced Algebra	1
Plane Trigometry	½
Solid Geometry	½
(4) Science:	
Physics, Biology or Chemistry	1
Physical Geography and Geology	1
Astronomy	½
Physiology and Hygiene	½
(5) Vocational and cultural subjects:	
Agriculture	1
Bookkeeping	1
Commercial Geography	½
Domestic Science	1
Drawing	
Mechanical 1 and 2	½ each
Freehand 1 and 2	½ each
Manual Training	1
Music	1
Stenography	1 or 2

One unit in any subject is the equivalent of work in that subject for five periods per week for a year of at least thirty-six weeks, periods to be not less than forty-five minutes in length. One unit is equivalent to 2 semester credits or 2 points.

(B) DETAILS OF THE COLLEGE REQUIREMENT.

a. The preliminary college course shall extend through two college sessions of at least thirty-two weeks each of actual instruction, including final examinations.

b. In excellence of teaching and in content, the work of this preliminary college course shall be equal to the work done in the freshman and sophomore years in standard colleges and universities.

c. This preliminary college course shall include courses in physics, chemistry, biology, and English, each course to embrace at least six, eight or twelve hours of work in each subject, as shown in the schedule following.

SCHEDULE OF SUBJECTS OF THE TWO-YEAR PRE-MEDICAL COLLEGE COURSE.

Sixty Semester Hours Required.

	Semester Hours.
REQUIRED COURSES:	
Chemistry (a)	12
Physics (b)	8
Biology (c)	8
English Composition and Literature (d)	6

COURSES STRONGLY URGED:

A modern foreign language.
Comparative vertebrate anatomy
Psychology
Social science

A semester hour is the credit value of sixteen weeks' work consisting of one lecture or recitation period per week, each period to be of not less than fifty minutes' duration net, at least two hours of laboratory work to be considered as the equivalent of one lecture or recitation period.

(a) CHEMISTRY. Twelve semester hours required, of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work. In the interpretation of this rule, work in qualitative analysis may be counted as general inorganic chemistry. The remaining four semester hours required shall consist of work in organic chemistry.

(b) Physics. Eight semester hours required, of which at least two must be laboratory work. This course presupposes a knowledge of plane trigonometry.

(c) Biology. Eight semester hours required, of which four must be laboratory work. This requirement may be satisfied by a course of eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany, but not by botany alone. The requirement may be satisfied also by 6 semester hours of college biology, including three semester hours in laboratory work, if preceded by a year (one unit) of high school biology.

(d) English Composition and Literature. The usual introductory college course of six semester hours, or its equivalent, is required.

POST-GRADUATE STUDENTS.

Graduates in medicine desiring to take the work of the senior year without being candidates for the degree and, therefore, without examination, may receive a certificate of attendance on completing the full course satisfactorily.

The requirements for graduates in medicine admitted to the fourth year class as candidates for the degree of Doctor of Medicine are the same as those enforced against undergraduates admitted to advanced standing.

COMBINED COURSE IN ARTS AND MEDICINE.

Students who have completed the junior year in our School of Liberal Arts and who have made an approved choice of electives may, if they desire, do the entire work of the senior year in the medical school of the University. If they successfully complete the work of the first medical year they are graduated with their class with the degree of Bachelor of Arts.

By taking advantage of this privilege a man may complete the Undergraduate and Medical courses in seven years.

During three of these years or until he has completed the work of the junior class he is a resident student in the School of Liberal Arts at College Park, Maryland, and for four years he is a student in the Medical School in Baltimore.

At the end of the fourth year he receives the A.B. degree, and at the end of the seventh year the M.D. degree, but credit from the Medical School cannot be accepted in subjects for which credit has already been given in the School of Liberal Arts.

The same privilege is allowed students of St. John's College, Annapolis, Maryland.

Special premedical courses have been arranged in our School of Liberal Arts at College Park and also by St. John's College at Annapolis.

RULES.

1. All students are required to take the spring examinations unless excused by the Dean. No student will be permitted to advance from a lower to a higher class with conditions.

2. Should a student be required to repeat any year in the course he must pay regular fees.

3. A student failing in final examinations for graduation at the end of the fourth year will be required to repeat the entire course of the fourth year and to take examinations in such other branches as may be required, should he be again permitted to enter the school as a candidate for graduation.

4. The general fitness of a candidate for graduation will be taken into consideration by the Faculty as well as the results of his examinations.

All the above rules, as well as the fees stated below, relate to the year ending June 9, 1923, only. The right is reserved to make changes in the curriculum, requirements for graduation, fees and any of the regulations whenever the faculty deem it expedient.

FEES.

Matriculation fee (paid each year)	$5.00
Tuition fee (each year) for residents of Maryland	250.00
Tuition fee (each year) for non-residents	300.00
Breakage fee (each year)	10.00
Special and re-examination fee	5.00

No fees are returnable, except unused portion of breakage fee.

Tuition fees are due and payable during October.

The above fees apply to all students who matriculate in this institution in any class for the session beginning October 2, 1922.

SPECIAL COURSES.

Anatomy		$75.00
Physiology		75.00
Pathology		75.00
Embryology		75.00
Bacteriology		75.00
Biological Chemistry		75.00
Pharmacology		75.00
Clinical Laboratory (four months)		100.00
X-Ray (four months)		150.00
Orthopedic Surgery (four months)		150.00
Genito-Urinary Diseases (four months)		150.00
Gynecology and Gynecological Pathology		100.00-150.00
Obstetrics, Out-door	6 weeks	$25.00
	4 months	50.00
Out-Door and In-Door	6 weeks	50.00
	4 months	100.00
Surgery	Clinical Surgery Operative Surgery Surgical Pathology	By arrangement
Medicine		By arrangement
Laboratory Technician Course, including Bacteriology and Clinical Pathology		$150.00

If the courses are taken during holidays or if special supervision is desired or additional material required, the charge is made accordingly.

FACULTY PRIZE.

To stimulate study among the candidates for graduation, the Faculty offers a Gold Medal to the candidate who passes the best general examination. Certificates of Honor are awarded to the five candidates standing next highest.

JOSE L. HIRSCH MEMORIAL PRIZE.

A prize of $50.00 is given each year by Mrs. Jose L. Hirsch as a memorial to the late Dr. Jose L. Hirsch, formerly Professor of Pathology in this school, to the student in the third year who has done the most satisfactory work in Pathology during his second and third years.

SCHOLARSHIPS.

THE DR. SAMUEL LEON FRANK SCHOLARSHIP.

This scholarship, established by Mrs. Bertha Rayner Frank as a memorial of the late Dr. Samuel Leon Frank, an alumnus of this University, entitles the holder to exemption from the payment of the tuition fee of that year.

It is awarded by the Trustees of the Endowment Fund of the University each year upon nomination of the Medical Council, "to a medical student of the University of Maryland, who, in the judgment of said Faculty, is of good character and in need of pecuniary assistance to continue his medical course."

This scholarship is awarded to a second, third or fourth year student only, who has successfully completed one year's work in the medical course, and no student may hold such scholarship for more than two years.

THE CHARLES M. HITCHCOCK SCHOLARSHIPS.

From a bequest to the School of Medicine by the late Charles M. Hitchcock, M.D., an alumnus of the University, two scholarships have been established which entitle the holders to exemption from payment of tuition fees for the year.

These scholarships are awarded annually by the Medical Council to students who have meritoriously completed the work of at least the first year of the course in medicine, and who present to the Faculty satisfactory evidence of good moral character and of inability to continue the course without pecuniary assistance.

THE RANDOLPH WINSLOW SCHOLARSHIP.

This scholarship, established by Prof. Randolph Winslow, M.D., LL.D., entitles the holder to exemption from the payment of the tuition fee of that year.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination of the Medical Council, to "a needy student of the Senior, Junior, or Sophomore Class of the Medical School."

"He must have maintained an average grade of 85% in all his work up to the time of awarding the scholarship."

"He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance."

THE LEO KARLINSKY SCHOLARSHIP.

This scholarship, established by Mrs. Ray Mintz Karlinsky as a memorial to her husband, the late Dr. Leo Karlinsky, an alumnus of the University, entitles the holder to exemption from the payment of the tuition fee of that year.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination of the Medical Council, to "a needy student of the Senior, Junior or Sophomore Class or the Medical School."

"He must have maintained an average grade of 85 per cent. in all his work up to the time of awarding the scholarship."

"He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance."

THE UNIVERSITY SCHOLARSHIPS.

Two Scholarships are awarded by the University. One to a student of the Department of Liberal Arts appointed by the President; the other, which entitles the holder to exemption from payment of the tuition fee of the year, is awarded annually by the Medical Council to a student of the Senior Class who presents to the Medical Council satisfactory evidence that he is of good moral character and is worthy of and in need of assistance to complete the course.

THE ST. JOHN'S SCHOLARSHIP.

This scholarship is awarded annually by the Medical Council upon the nomination of the President of St. John's College.

It entitles the holder to exemption from the payment of the tuition fee of that year.

FREDERICA GEHRMANN SCHOLARSHIP.

This scholarship was established by bequest of the late Mrs. Frederica Gehrmann and entitles the holder to exemption from payment of tuition fees. This scholarship is awarded to a second year student who at the end of the year passes the best practical examination in Anatomy, Physiology, Biological Chemistry, Pharmacology, Pathology, Immunology and Serology.

NOTICE TO STUDENTS.

The personal expenses of students are at least as low in Baltimore as in any large city in the United States. The following estimates of student's personal expenses for the academic year of eight months have been prepared by students, and are based upon actual experience:

Items.	*Low.*	*Average.*	*Liberal.*
Books	$27	$48	$75
College Incidentals	20	20	20
Board, eight months	200	250	275
Room rent	64	80	100
Clothing and laundry	50	80	150
All other expenses	25	50	75
Total	$386	$529	$695

Students will save time and expense upon their arrival in the city by going direct to the School of Medicine on the University grounds, N. E. corner of Lombard and Greene Streets, where the Superintendent of Buildings, who may be found at his office on the premises, will furnish them with a list of comfortable and convenient boarding houses suitable to their means and wishes.

The Dean will, if desired, attend to the collection of checks and drafts for students.

For further information apply to

J. M. H. Rowland, M.D., *Dean,*
Lombard and Greene Streets.

ORGANIZATION OF THE CURRICULUM.

The following curriculum is the result of a thorough revision of teaching in this school in order to meet modern requirements. The multiplication of specialties in medicine and surgery necessitates a very crowded course and the introduction of electives will very soon be depended on to solve some of the difficulties.

The curriculum is organized under èleven departments:

1. Anatomy (including Histology and Embryology).
2. Physiology.
3. Biological Chemistry.
4. Pharmacology and Materia Medica.
5. Pathology.
6. Bacteriology.

7. Medicine (including Medical Specialties).
8. Surgery (including Surgical Specialties).
9. Obstetrics.
10. Gynecology.
11. Ophthalmology and Otology.

The instruction is given in four years of graded work.

Several courses of study extend through two years or more, but in no case are the students of different years thrown together in the same course of teaching.

The first and second years are devoted largely to the study of the structures and functions of the normal body, and laboratory work occupies most of the student's time during these two years.

Some introductory instruction in Medicine and Surgery is given in the second year. The third and fourth years are almost entirely clinical.

A special feature of instruction in the school is the attempt to bring together teacher and student in close personal relationship. In many courses of instruction the classes are divided into small groups and a large number of teachers insures attention to the needs of each student.

In many courses the final examination as the sole test of proficiency has disappeared and the student's final grade is determined largely by partial examinations, recitations and assigned work carried on throughout the course.

DEPARTMENT OF ANATOMY, INCLUDING HISTOLOGY AND EMBRYOLOGY.

C. L. Davis, M.D.	Professor of Anatomy
Tilghman B. Marden, A.B., M.D.	Professor of Histology and Embryology
M. J. Hanna, M.D.	Associate in Anatomy
Howard B. McElwain, M.D.	Instructor in Anatomy
A. E. Goldstein, M.D.	Instructor in Histology

First Year. *Didactic.* Five hours each week for thirty-two weeks. Each day, preceding the laboratory period, a quiz and demonstration of from 40 to 50 minutes is held, covering the laboratory work for the day.

Laboratory. Eighteen hours each week for sixteen weeks. Twelve hours each week for sixteen weeks. This course includes a complete dissection of the human body, including the central nervous system. Abundance of good material is furnished and the student is aided in his work by competent demonstrators. Practical examinations are held at frequent intervals throughout the session and each student will be held to strict account for material furnished him. Each student is furnished a skeleton and a deposit is required to insure its return in good condition at the end of the session.

SECOND YEAR. *Didactic.* Three hours each week for six weeks. Lectures, recitations and conferences.

Laboratory. Seven hours each week for six weeks. This course is devoted exclusively to Neuro-Anatomy. A complete dissection of the human brain is required. This is followed by a study of the fiber tracts of the spinal cord and brain, special models and preparations being used for this part of the course.

HISTOLOGY.

FIRST YEAR. Lectures, recitations and laboratory work, nine hours each week during first semester; three hours each week during second semester. The most important part of the work will be done in the laboratory, where each student will be provided with a microscope, apparatus, staining fluids and material necessary for the preparation of specimens for microscopical examination. An important aid to the course is the projection microscope which is used for the projection upon a screen of magnified images of the specimens actually used in the laboratory.

A large number of completely prepared sections are loaned to the students for study. This materially reduces the time otherwise required by the student for the preparation of sections and insures the best possible class of material for study.

EMBRYOLOGY.

Lectures, recitations and laboratory work; six hours each week during the second semester.

This course includes the study of the development of the chick, and the fundamental principles of mammalian embryology. In the laboratory, the hen's egg will be studied in its various stages of development, and sections of the chick at different periods of incubation will be made and studied microscopically. The latter part of the course will be devoted to the study of sections through different regions of a mammal.

Special emphasis is laid upon the development in the human.

DEPARTMENT OF PHYSIOLOGY.

BARTGIS MCGLONE. A.B., Ph.D., F.A.C.P............Professor of Physiology
CHARLES C. CONSER, M.D................Associate Professor of Physiology
HAROLD E. WRIGHT, M.D..........................Associate in Physiology
FIRMADGE K. NICHOLS, A.B., M.D.................Instructor in Physiology

The course in Physiology extends throughout the First and Second Years. It consists of a series of lectures, covering the field of human physiology, laboratory work, demonstrations, and frequent recitations. It is constantly in the mind of the department that this course is introductory to the study of medicine. The recitations cover the subject-matter of the lectures and the experiments performed in the laboratory.

FIRST YEAR. 1. This course includes lectures and recitations upon the physiology of the blood and circulation, respiration, muscle and nerve, a portion of the central nervous system, and special senses, and such chemical and physical facts as are necessary for a proper understanding of the physiology taught. Two lectures and a recitation weekly throughout the year. Dr. McGlone, assisted by Dr. Wright.

SECOND YEAR. 2. *Didactic instruction.* During this year the remaining topics of physiology are covered by lectures and demonstrations. As in the first year frequent recitations will be held. The subject-matter includes the physiology of digestion and secretion, nutrition, metabolism, internal secretion, the central nervous system, and the eye and ear. Lectures, demonstrations, and recitations, three hours per week. Dr. McGlone, assisted by Dr. Conser.

3. *Experimental Physiology.* This is a laboratory course in the dynamics of muscle and nerve, studies in circulation and respiration, and physiology of the special senses. Apart from the acquisition of the facts of physiology, the student is taught to observe accurately, record carefully the results of his observations, and from these results draw an independent conclusion. He is also trained in the use of instruments which are of value to him in his clinical years. Three hours weekly throughout the year. Drs. McGlone, Conser and Wright.

4. *Elective Course in Physiological Technique.* This course is offered to Sophomores. Three hours per week. Second semester.

5. *Special Mammalian Physiology.* This is a laboratory course intended for advanced Laboratory students (optional) who may

wish to do special work in this line of physiology. Hours to be arranged. Dr. McGlone.

6. *Research in Physiology.* Properly qualified students will be admitted to the laboratory, which is well adapted for post graduate study and special research. Hours will be arranged to suit individuals. Dr. McGlone.

PHARMACOLOGY AND MATERIA MEDICA.

William Henry Schultz, Ph.B., Ph.D.........Professor of Pharmacology
O. G. Harne, A.B.....................Associate Professor of Pharmacology

1. *Pharmacology.* Materia Medica and Prescription Writing required of all second year medical students during the first semester. Didactic, three hours a week; Laboratory, three hours a week.

This course is a prerequisite to all other courses in Pharmacology. Special emphasis is laid upon laboratory methods of observation and of intelligent note-taking. The essentials of prescription writing are taught and the student is introduced to the official pharmacopoeal preparations.

Not only is the student taught intelligently to use the United States Pharmacopea and the National Formulary, but the principles underlying the establishing of some of the most practical receipts are attacked from a didactic point of view.

2. *Systematic Pharmacology.* Required of all second year medical students. Three hours a week during the year, two lecture periods and one period for quiz and general conferences. Special care is taken to adapt the material to the practical needs of the medical student. Emphasis, however, is laid upon the pharmacological action of drugs as a pure science in order that a critical attitude toward drugs may be instilled. As the student masters the pharmacology of an important drug, its dosage, incompatibilities, and practical applications are driven home by systematic assignments of prescription writing, quizes, and conferences.

3. *Pharmacodynamics.*—Second semester. Required of all second year medical students. Prerequisite pharmacology 1. Laboratory, six hours a week.

The course runs parallel with pharmacology 2. Being a laboratory course it furnishes much didactic material used in the class conferences and lectures of pharmacology No. 2.

As the student's ability in handling biological material develops, experiments involving the more difficult technic of pharmacological experimentation are introduced. Special emphasis is laid upon the student's ability to handle live tissues and to make first-hand observations of a given drug's action, regardless of what standard text-books teach.

Class conferences, discussions, and the reading of assigned papers are used to supplement the laboratory and lecture. In these conferences the professor in charge attempts to summarize the class work as a whole, thereby properly coordinating it. It is by these means that the student acquires a critical and scientific attitude toward *official* and *new and non-official remedies*. The study is limited for the most part to such drugs as are known to have a definite pharmacological action and therapeutic value.

4. *Special Pharmacodynamics.* (Credit according to work done.) This course is open to advance students and special workers who desire advanced training, or who wish to pursue some special problem in Pharmacology or Toxicology. Hours to be arranged. Professor Schultz.

5. *Research in Pharmacology and Chemo-Therapy.* Properly qualified students are admitted to the laboratory with a view to their carrying on original investigations in drug action. The newly equipped laboratories are well adapted for post-graduate study and research in Pharmacology. Hours will be arranged to suit the applicant. Professor Schultz.

DEPARTMENT OF PATHOLOGY.

Hugh R. Spencer, M.D.	Professor of Pathology
Standish McCleary, M.D.	Professor of Pathology
Sydney Cone, M.D.	Associate Professor of Pathology
Wm. J. Carson, M.D.	Associate Professor of Pathology
E. D. Weinberg, M.D.	Assistant in Pathology
A. E. Goldstein, M.D.	Assistant in Pathology

Courses of instruction in pathology are given during the second, third and fourth years. The courses are based on previous study of normal structures and functions and aim to outline the natural history of disease. The instruction is made as practical as possible that the student may become familiar with the appearance of organs and tissues in disease and may be able to correlate anatomical lesions with clinical symptoms and signs.

1. General Pathology and Histo-pathology. This course is given to second year students, it includes the study and demonstration of disturbances of the body fluids, disturbances of structure, nutrition and metabolism of cells, disturbances of fat, carbohydrate and protein metabolism, disturbances in pigment metabolism, inflammation and tumors. The laboratory course consists in a daily preliminary lecture, after which the student is given microscopical sections for study. Gross material from autopsy and from the museum is demonstrated in conjunction with the microscopical study.

2. Applied Pathology, including Gross Morbid Anatomy and Morbid Physiology. Third year students: In this course the special relationship of the gross and microscopical lesions to clinical symptoms and signs is emphasized. Fresh material from autopsy collected at the various hospitals is demonstrated and supplemented by a study of the respective autopsy protocols.

Special stress is laid upon the study of the infectious diseases and where possible the causative agents are studied.

3. Autopsies. Third year. Autopsy technic is taught to small groups of students by special instruction at autopsies performed at the various hospitals. Students are required to assist at the autopsy, study the organs, examine the microscopical sections, make cultures and prepare autopsy protocols.

4. Clinical Pathological Conference. Fourth year. Material from autopsies is studied with reference to the clinical history and gross and microscopical anatomy, the course is illustrated with sections of fixed material or lantern slides.

5. Advanced Work in Pathology. Properly qualified students will be permitted to carry out advanced or research work along the lines of experimental pathology. Adequate space and equipment is available.

DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY.

Wm. Royal Stokes, M.D., Sc.D.	Professor of Bacteriology
Frank W. Hachtel, M.D.	Associate Professor of Bacteriology
Louis F. Krumrein, M.D.	Instructor in Bacteriology
Henry F. Buettner, M.D.	Instructor in Bacteriology
J. A. F. Pfeiffer, M.D.	Instructor in Bacteriology

Instruction in special bacteriology is given in the laboratory to the students of the first year during one semester. This includes the various methods of sterilization and preparation of culture material, the study of pathogenic microorganisms of vegetable origin, and the bacteriological study of water, milk, sewage, and other such materials. The bacteriological diagnosis of the infectious diseases is also included in this course. Animal inoculations and autopsies are performed in connection with the bacteria studied and diagnoses by means of serum reactions are also given. In the third year the various animal parasites are demonstrated and the diseases produced by these organisms studied by means of gross specimens, stained sections and lantern slides. The principles of general bacteriology are taught by lectures given twice a week during one semester. These lectures include the structure of bacteria, the various facts concerning their biological properties, infection and immunity.

The general principles of immunology are described in lectures to the second year class throughout the first semester and practical experiments in immunology are demonstrated to this class in laboratory sessions of three hours each, held twice weekly throughout the first semester.

DEPARTMENT OF BIOLOGICAL CHEMISTRY.

H. Boyd Wylie, M.D.	Professor of Biological Chemistry
Frank N. Ogden, M.D.	Instructor in Biological Chemistry

Instruction in Biological Chemistry comprises laboratory work, lectures and conferences.

Laboratory Work. The first few weeks of the laboratory work consists in the preparation of normal and standard solutions which requires careful use of the analytical balance and of volumetric glassware. The knowledge gained in this preliminary period is then put to practical application in the making of quantitative determinations of nitrogenous compounds of known nitrogen content. Daily reports are required of each student in this work and a careful record is kept of his ability.

At the end of this period there follows a long course of laboratory work on the chemistry and metabolism of the carbohydrates, proteins and lipins. Each type of foodstuff is considered separately; first its chemistry is studied and then its metabolism. In following this arrangement the usual long stretch of the pure chemistry of all of the foodstuffs is eliminated.

Experiments on the tissues of the body then follow, and precede the final group of experiments on bile, milk and those which relate to the more thorough study of blood and urine.

Throughout the laboratory work the older methods have been excluded, and those tests which are a duplication of the same principle have been reduced to a minimum. Qualitative tests include only those which are representative and essential. A great deal of stress is laid upon the importance of quantitative and metabolic experiments, so that this type of work constitutes the major part of the laboratory experiments in this course.

Lectures. The lectures precede or run parallel to the laboratory work, as far as possible. The first lectures deal with laboratory technic, the chemistry of solutions and indicators, osmosis, the chemistry of colloids, catalysis, reversible reactions, the law of mass action and a discussion of enzymes. The lectures which follow refer to the chemistry and metabolism of carbohydrates, proteins and lipins. Relatively less time is given to the discussion of the chemistry of the various foodstuffs and more to the discussion of their metabolism. In these lectures the fundamental principles (biological, physical and chemical) are emphasized, however, not to the exclusion of the correlation of the normal and abnormal metabolism.

The final lectures relate to discussions of the secretions, including milk, and of the blood and urine, including the metabolism of inorganic substances, salts and water.

Conferences. From time to time conferences are held for the purpose of summarizing the work completed; to discuss any problems that have arisen during the course, and to review articles in journals which have a bearing on the current laboratory or lecture work.

During the second semester sections are sent into the hospital for the purpose of collecting data on special metabolic or associated conditions. This data will be presented to the class as a whole and later discussed at a special clinic conducted in the hospital by a member of the Department of Medicine in collaboration with this department.

CLINICAL INSTRUCTION.

DEPARTMENT OF MEDICINE.

Maurice C. Pincoffs, S.B., M.D	Professor of Medicine
Gordon Wilson, M.D	Professor of Medicine
Cary B. Gamble, Jr., A.M., M.D	Professor of Medicine
Standish McCleary, M.D	Professor of Pathology and Clinical Medicine
Jos. E. Gichner, M.D	Professor of Clinical Medicine.
Charles W. McElfresh, M.D	Professor of Clinical Medicine
G. Carroll Lockard, M.D	Professor of Clinical Medicine
Harvey G. Beck, M.D., Sc.D	Professor of Clinical Medicine
Hubert C. Knapp, M.D	Associate Professor of Medicine
Paul W. Clough, B.S., M.D	Associate Professor of Medicine
C. C. W. Judd, A.B., M.D	Associate Professor of Medicine
Sydney R. Miller, M.D	Associate Professor of Medicine
John Lutz, A.B., M.D	Associate Professor of Medicine
H. D. McCarty, M.D	Associate Professor of Clinical Medicine
Wm. H. Smith, M.D	Associate Professor of Clinical Medicine
H. J. Maldeis, M.D	Associate Professor of Medical Jurisprudence
S. Lloyd Johnson, A.B., M.D	Assistant Professor of Medicine
R. C. Metzel, M.D	Associate in Clinical Medicine
W. I. Messick, M.D	Associate in Clinical Medicine
George McLean, M.D	Associate in Medicine
Harry M. Stein, M.D	Associate in Medicine
L. A. M. Krause, M.D	Associate in Medicine
E. E. Mayer, M.D	Instructor in Medicine
D. Corbin Streett, M.D	Instructor in Medicine
C. C. Habliston, M.D	Instructor in Medicine
Martin Sloan, M.D	Instructor in Medicine
H. R. Lickle, M.D	Instructor in Medicine
J. W. Martindale, M.D	Instructor in Medicine
C. R. Goldsborough, A.M., M.D	Instructor in Medicine
Horace Byers, M.D	Assistant in Medicine
B. B. Brumbaugh, M.D	Assistant in Medicine
Herman Seidel, M.D	Assistant in Medicine
Wetherbee Fort, M.D	Assistant in Medicine

GENERAL OUTLINE.

Second Year.

Introduction to clinical medicine.
- (a) Introductory physical diagnosis.
  - (1 hour a week, first semester.)
  - (2 hours a week, second semester.)
- (b) Clinical lectures on pathological physiology.
  - (1 hour a week, second semester.)

Third Year.

I. The methods of examination (13 hours a week).
- (a) History taking.
- (b) Physical diagnosis.
- (c) Clinical pathology.

These subjects are taught and practiced in the out-patient department and in the clinical laboratory.

II. The principles of medicine (7 hours a week).
- (a) Lectures, clinics and demonstrations in general medicine, neurology, pediatrics and preventive medicine.

III. The principles of therapeutics (2 hours a week).
- (a) Lectures and demonstrations in general therapeutics, physical therapeutics and materia medica.

Fourth Year.

The practice of medicine.

I. Clinical clerkship on the medical wards.
(26 hours a week for ten weeks.)
- (a) Responsibility, under supervision, for the history, physical examination, laboratory examinations and progress notes of assigned cases.
- (b) Ward classes in general medicine, the medical specialties, and therapeutics.

II. Clinics in general medicine and the medical specialties (6 hours a week).

III. Dispensary work in the medical specialties.

IV. Clinical pathological conferences (1 hour a week).

Medical Dispensary Work.

The medical dispensaries of both the Mercy and the University Hospitals are utilized for teaching in the third year. Each student spends two periods a week of two hours each in dispensary work. The work is done in groups of four to six students under an instructor. Systematic history taking is especially stressed. Physical findings are demonstrated. The student becomes familiar with the commoner acute and chronic disease processes.

PHYSICAL DIAGNOSIS.

SECOND YEAR. Didactic lectures and practical demonstrations in the medical topography and the physical conditions in health. Instruction and practice in systematic physical examination.

THIRD YEAR. The class is divided into small groups, and each section receives instruction for four hours a week for the entire session in the medical dispensaries of the hospitals. The large clinical material of the dispensaries and hospitals is utilized to give each student the opportunity to familiarize himself with the common types of bodily structure, with the normal variations in physical signs and with the physical signs of the chief pulmonary, circulatory and abdominal diseases.

TUBERCULOSIS.

During the third year in connection with the instruction in physical diagnosis a practical course is given twice weekly to sections of the class at the Municipal Tuberculosis Hospital. Stress is laid upon the recognition of the physical signs of the disease, as well as upon its symptomatology and gross pathology. Dr. McCarty and associates.

THERAPEUTICS.

THIRD YEAR. General therapeutics and materia medica are taken up and an effort is made to familiarize the student with the practical treatment of disease. The special therapy of the chief diseases is then reviewed. Two hours a week. Dr. Lockard.

The principles of physical therapy are taught in a special lecture and demonstration course consisting of six one-hour periods. Dr. Gichner.

FOURTH YEAR. Special consideration is given to the practical application of therapeutic principles in bedside teaching and the chief therapeutic methods are demonstrated.

CLINICAL PATHOLOGY.

John Lutz, M.D	Associate Professor of Medicine
H. J. Maldeis, M.D	Associate Professor of Medical Jurisprudence
L. A. M. Krause, M.D	Associate in Medicine
C. R. Goldsborough, M.D	Instructor in Medicine

During the third year the student is thoroughly drilled in the technique of the usual clinical laboratory work, so that he is able to perform all routine examination which may be called for during his fourth year, in connection with the work in the wards and dispensary.

The practical work is supplemented by a series of didactic lectures and demonstrations in which the entire teaching staff of the department takes an active part. The microscopical and chemical study of blood, exudates and transudates, gastric juice, spinal fluid, feces and urine are successively taken up, and special attention directed to the clinical significance of the findings.

Clinical parasitology from the standpoint of the infecting agent and the carrier, is given careful consideration.

The entire course is thoroughly practical. Each student is provided with a microscope, blood counters and hemoglobinometer for his exclusive use, and every two students with a special laboratory outfit for all routine purposes.

During the fourth year the student applies what he has learned during the preceding year in the laboratories of the various affiliated hospitals. He is also supplied with a laboratory outfit which is sufficiently complete to enable him to work independently of the general equipment. Special instructors are available during certain hours to give necessary assistance and advice.

GASTRO-ENTEROLOGY.

Julius Friedenwald, A.M., M.D	Professor of Gastro-Enterology
T. Fred. Leitz, M.D	Clinical Professor of Gastro-Enterology
J. Harry Ullrich, M.D	Associate in Gastro-Enterology
Theodore H. Morrison, M.D	Associate in Gastro-Enterology
Maurice Feldman	Instructor in Gastro-Enterology
Joseph Sindler, M.D	Assistant in Gastro-Enterology
Z. Morgan, M.D	Assistant in Gastro-Enterology
M. S. Koppelman, M.D	Assistant in Gastro-Enteroogy
M. Chideckel, M.D	Assistant in Gastro-Enterology
N. J. Davidov, M.D	Assistant in Gastro-Enteroogy
Albert Eisenberg, M.D	Assistant in Gastro-Enterology
Paul F. Wiest, M.D	Assistant in Gastro-Enterology

Fourth Year. Clinic recitations and demonstrations to the class for one hour a week throughout the session. Dispensary instruction to small groups throughout the entire session. Practical instruction in the differential and clinical diagnosis and demonstrations of the newer methods of diagnosis in gastro-intestinal affections.

PSYCHIATRY.

R. M. Chapman, M.D	Professor of Psychiatry
G. F. Sargent, M.D	Associate in Clinical Psychiatry
Paul J. Ewerhardt, M.D	Associate in Psychiatry
George E. Clarke, M.D	Associate in Psychiatry

Fourth Year. This subject is taught by means of didactic and clinical lectures. Abundant material is at the command of this department in the various institutions which are presided over by the teachers in psychiatry. The student is brought into contact with the early manifestations of mental disease in the dispensaries of the University and Mercy Hospitals, and in a series of clinics opportunity is afforded to observe the course and later manifestations of the disease, often in these same patients, at the Sheppard-Enoch Pratt Hospital, Mount Hope Retreat, and City Detention Hospital.

PEDIATRICS.

John Ruhrah, M.D	Professor of Pediatrics
Charles L. Summers, M.D	Professor of Pediatrics
Edgar B. Friedenwald, M.D	Clinical Professor of Pediatrics
C. Loring Joslin, M.D	Associate in Pediatrics
W. H. Ingram, M.D	Instructor in Pediatrics
J. F. Hawkins, M.D	Assistant in Pediatrics
Howard H. Warner, M.D	Assistant in Pediatrics
John Houff, M.D	Assistant in Pediatrics
B. J. Ferry, M.D	Assistant in Pediatrics
William J. Todd, M.D	Assistant in Pediatrics
John H. Traband, M.D	Assistant in Pediatrics
William F. Geyer, M.D	Assistant in Peidatrics
George E. Wells, M.D	Assistant in Pediatrics
F. B. Smith, M.D	Assistant in Pediatrics
P. Artigiani, M.D	Assistant in Pediatrics
I. J. Feingart, M.D	Assistant in Pediatrics

Third Year. Instruction during the third year consists of one lecture each week in which infant feeding and the most important diseases of infancy and childhood are especially emphasized. Drs. Ruhrah and Summers.

Fourth Year. During this year a weekly clinical lecture is given where the character of disease is fully demonstrated and the students are afforded an opportunity for personal examination of all cases. In addition ward classes are held weekly where bedside instruction is given. A section of the class also works daily in the Babies' and Children's Clinic. This clinic, which is under the direction of Dr. Summers, has an attendance of more than one thousand monthly, and offers an excellent opportunity for study and observation of a wide variety of cases under competent instructors.

Instruction is also given in the Children's Dispensary at the Mercy Hospital.

NEUROLOGY.

Irving J. Spear, M.D	Professor of Neurology
Andrew C. Gillis, A.M., M.D	Professor of Neurology
G. M. Settle, A.B., M.D	Associate Professor of Neurology
Benjamin Pushkin, M.D	Instructor in Neurology
Milton Levy, M.D	Instructor in Neurology
J. A. Skladowsky, M.D	Assistant in Neurology

Third Year. Lectures and recitations two hours each week to entire class throughout one semester. This course comprises the study of the anatomy and physiology of the nervous system, the method of neurological examination, and relationship of signs and symptoms to pathological conditions. The material at the University and Mercy Hospitals is available.

Clinical Conference, one hour each week to the entire class. This subject is taught at the University and Mercy Hospitals. All cases presented at these clinics are carefully examined; complete written records are made by the students who demonstrate the cases before the class. These cases are usually assigned one or two weeks before they are presented, and each student in the class must prepare one or more cases during the year.

Ward Class Instruction. In small sections at the University and Mercy Hospitals. In these classes the students come in close personal contact with the cases in the wards under the supervision of the instructor.

Dispensary Instruction. Small sections are instructed in the dispensaries of the University and Mercy Hospitals four afternoons each week. In this way students are brought into contact with nervous diseases in their earlier as well as later manifestations.

HYGIENE AND PREVENTIVE MEDICINE.

C. Hampson Jones, M.D., C.M.	Professor of Hygiene and Public Health

Third Year. Two lectures a week throughout the session. The lectures will encompass the fundamental subjects: Air, Water, Soil, Food, Disposal of Wastes, Communicable Diseases, State and Federal Public Health Laws, and Industrial Diseases.

MEDICAL JURISPRUDENCE.

H. J. Maldeis, M.D.	Associate Professor of Medical Jurisprudence Baltimore City Post Mortem Physician.

Third Year. One hour each week for one semester.

Inasmuch as Medical Jurisprudence teaches the application of every branch of medical knowledge to the needs of law, civil or criminal, this course embraces the following:—Proceedings in criminal and civil prosecution; medical evidence and testimony; identity in its general relations; sexual abnormalities; personal identity; impotence and sterility; rape; criminal abortions; signs of death; wounds in their medico-legal relations; death, natural and homicidal; malpractice; insanity and medico-legal autopsies.

DEPARTMENT OF SURGERY.

Arthur M. Shipley, Sc.D., M.D	Professor of Surgery
Archibald C. Harrison, M.D	Professor of Surgery
Alexius McGlannan, A.M., M.D	Professor of Surgery
Joseph H. Branham, M.D	Professor of Clinical Surgery
Nathan Winslow, A.M., M.D	Clinical Professor of Surgery
Page Edmunds, M.D	Clinical Professor of Industrial Surgery
Walter D. Wise, M.D	Clinical Professor of Surgery
Joseph W. Holland, M.D	Clinical Professor of Surgery
J. C. Lumpkin, M.D	Clinical Professor ofSurgery
William W. Requardt, M.D	Associate Professor of Surgery
H. C. Blake, M.D	Associate Professor of Clinical Surgery
Frank S. Lynn, M.D	Associate Professor of Surgery

Elliott H. Hutchins, A.M., M.D	Associate Professor of Surgery
Thomas R. Chambers, A.M., M.D	Associate Professor of Surgery
R. W. Locher, M.D	Associate Professor of Operative and Clinical Surgery
E. H. Hayward, M.D	Associate in Surgery
Frank J. Kirby, M.D	Associate in Surgery
Charles Reid Edwards, M.D	Associate in Surgery
F. L. Jennings, M.D	Instructor in Surgery
A. M. Evans, M.D	Instructor in Surgery
E. P. Smith, M.D	Instructor in Operative Surgery
H. M. Foster, M.D	Instructor in Surgery
E. S. Johnson, M.D	Instructor in Surgery
F. X. Kearney, M.D	Assistant in Surgery
G. W. Bowden, M.D	Assistant in Surgery
Dwight Mohr, M.D	Assistant in Surgery
Amos Hutchins, M.D	Assistant in Surgery
C. A. Reifschneider, M.D	Assistant in Surgery
Wm. R. Geraghty, M.D	Assistant in Surgery
S. Demarco, M.D	Assistant in Surgery
O. H. Lloyd, M.D	Assistant in Surgery
Clyde Marvel, M.D	Assistant in Surgery
Everard Briscoe, M.D	Assistant in Surgery
I. O. Ridgely, M.D	Assistant in Surgery
H. B. McElwain, M.D	Assistant in Surgery
C. F. Horine, M.D	Assistant in Surgery

The teaching is in the Anatomical Laboratory and the dispensaries, wards, clinical laboratories and operating rooms of the University and Mercy Hospital, and in the wards and dead-house of the Municipal Hospitals at Bay View.

Instruction is given by means of lectures, recitations, dispensary work, bedside instruction, ward-classes, and clinics. The work begins in the second year, and continues throughout the third and fourth years.

Second Year.

Topographic and Surgical Anatomy, 10 hours a week for the first semester. The course is designed to bridge the gap between anatomy in the abstract, and clinical anatomy as applied to the study and practice of medicine and surgery.

The teaching is done in the anatomical laboratory, and students are required to demonstrate all points, outlines, and regions on the cadaver. Underlying regions are dissected when necessary to bring out outlines and relation of structures. Didactic lectures two hours weekly, augmented by demonstrations with specimens, charts, and cross-sections. Dr. Holland, assisted by Drs. Reifschneider, Foster, J. Mason Hundley, Jr., and Reitzel.

Surgical Technique. The course includes history taking, first aid treatment, demonstration of use of tourniquet and other emergency appliances and surgical dressings, bandages, plaster, adhesive plaster, suture material, solutions; their preparation and use.

It includes also inflammation and suppuration, ulcers, gangrene, fistulae, sinuses, non-operative therapeusis, asepsis and antisepsis, the study of circulatory and respiratory failure, preparation of patients, dummy operations and written description of operation, splints, bed frames, bone plates, grafts and local anaesthesia.

Lectures and conferences, two hours a week for one semester. Dr. Edwards.

THIRD YEAR.

General and Regional Surgery. Principles of surgery and general surgery, three hours a week throughout the year to the entire class, lectures, recitations and clinics. Dr. Shipley.

The class is divided into groups and receives instruction in history-taking, gross pathology, and surgical diagnosis—at the bedside and in the deadhouse of the Municipal Hospitals at Bay View. Drs. Shipley and Lynn.

Operative Surgery. Instruction is given in operative surgery upon the cadaver and on dogs. The class is divided into sections, and each section is given practical and individual work under the supervision of the instructors. Dr. Frank S. Lynn, assisted by Drs. Nathan Winslow, Locher, Hayward, E. S. Johnson, Edwards, Foster, Reifschneider, Geraghty, Demarco, Kearney, Briscoe and Horine.

Fractures and Dislocations. Twenty-four hours to entire class. This course consists of instruction in the various forms of fractures and dislocations and their treatment, and serve as a preparatory course for clinical work. Dr. Wise.

Surgical Dispensary. Under supervision, the student takes the history, makes the physical examination, attempts the diagnosis, and, as far as possible, carries out the treatment of the ambulatory surgical cases in the University and Mercy Hospitals. Mercy Hospital—Drs. Amos Hutchins, Mohr, A. M. Evans, Wheaton, Kearney, Lloyd and Marvel. University Hospital—

Drs. Holland, Lynn, Hayward, Edwards, E. S. Johnson and Foster.

FOURTH YEAR.

Clinics. A weekly clinic will be given at the Mercy and University Hospitals to one-half the class throughout the year. As far as possible this is a diagnostic clinic. Mercy Hospital—Drs. Harrison and McGlannan. University Hospital—Dr. Shipley.

Surgical Pathology. A weekly exercise of one hour at Mercy Hospital for one semester, at which specimens from the operating-room and museum are studied in the gross and microscopically, in relation with the case history. Dr. McGlannan.

Industrial Surgery. Operative and post-operative treatment of accident cases, with instructions as to the relationship between the state, the employee, and employer, and the physician's duty to each. One hour a week to sections of the class throughout the year. Dr. Edmunds.

Clinical Clerkship. The personal study of assigned hospital patients, under supervision of the staffs of University and Mercy Hospitals, history taking, and physical examinations of patients, laboratory examinations, attendance at operations and observation of post-operative treatment.

Ward Classes. Ward class instruction in small groups, will consist of ward rounds, surgical diagnosis, treatment and the after care of operative cases. Mercy Hospital—Drs. Harrison, McGlannan, Wise, Elliott Hutchins, Evans and Locher. University—Drs. Shipley, Holland, Edmunds, Lynn and Edwards.

ANAESTHESIA.

THIRD YEAR.

Lectures on the history of anaesthesia, general physiology of inhalation of anaesthetics, special physiology of each anaesthetic, methods of administration, inhalation, colonic, intravenous, complications and preventive methods, including artificial respiration and post-anaesthesia treatment of patients. One hour weekly for one semester. Dr. S. Griffith Davis.

Anaesthesia in obstetrics, one lecture. Dr. J. McF. Bergland.

FOURTH YEAR.

During the clinics and operations before small groups, each student will be required to administer anaesthetic under the direction of an instructor. University Hospital—Drs. Queen and Moore. Mercy Hospital—Drs. Kearney and Ridgely.

DERMATOLOGY.

T. Caspar Gilchrist, M.R.C.S., L.S.A., M.D	Professor of Dermatology
Melvin Rosenthal, M.D	Associate Professor of Dermatology
John R. Abercrombie, A.B., J.D	Associate Professor of Dermatology
Harry M. Robinson, M.D	Associate in Dermatology
Joseph E. Gately, M.D	Instructor in Dermatology
John A. Buchness, M.D	Assistant in Dermatology

Clinical conference one hour each week to entire class. This course will consist of demonstrations of the common diseases of the skin. Dr. Gilchrist.

Dispensary instruction, University Hospital, Mondays, Wednesdays and Fridays in the diagnosis and treatment of the common skin diseases. Dr. Abercrombie. Dispensary instruction, Mercy Hospital, Drs. Rosenthal, Robinson and Gately.

ORTHOPAEDIC SURGERY.

R. Tunstall Taylor, A.B., M.D	Professor of Orthopedic Surgery
Albertus Cotton, A.M., M.D	Professor of Orthopedic Surgery
Compton Riely, M.D	Clinical Professor of Orthopedic Surgery
W. H. Daniels, M.D	Demonstrator in Orthopedic Surgery
W. Arthur Darby, M.D	Demonstrator in Orthopedic Surgery
H. L. Wheeler, M.D	Demonstrator in Orthopedic Surgery

In this course didactic, clinical, bedside and out-patient instruction will be given. This instruction is provided in the University Hospital Amphitheater and Dispensary, Mercy Hospital and Dispensary and Kernan Hospital and Industrial School for Crippled Children at "Radnor Park," and in the Dispensary of same at 620 West Lombard Street.

Lectures, clinics and quizzes will be held at each of the hospitals once a week. In addition, a weekly bedside clinic will be held for small sections of the class at "Radnor Park."

The course will cover instruction in special methods and instruments required in this surgical specialty, including X-Ray technique; Wolff's law; tuberculosis of bones and joints; deformities of the feet; non-tuberculous deformities of the feet and joints; the paralyses; the bursal, tendinous and muscular conditions producing orthopedic affections; rickets; scurvy; osteomalacia; chondrodystrophies; wry-neck and the use and application of orthopedic apparatus.

ROENTGENOLOGY AND RADIOTHERAPY.

Henry J. Walton, M.D.	Professor of Roentgenology
Albertus Cotton, A.M., M.D.	Professor of Roentgenology
John Evans, M.D.	Associate Professor of Roentgenology
Charles Reid Edwards, A.B., M.D.	Associate in Radio Therapy

Instruction is given in the history, physics, and practical application of Roentgen Rays and Radium. Especial effort is made to demonstrate the use of the Roentgen Ray in diagnosis by instruction in both fluoroscopy and plate reading. The sections of the fourth year class receive two hours instruction each week.

The student is also taught the practice, application of Radium and Roentgen rays as therapeutic agents. In the X-ray laboratory and in the hospital wards students are shown the use of these agents in the treatment of disease.

DISEASES OF THE THROAT AND NOSE.

Edward A. Looper, M.D.,	Clinical Professor of Diseases of the Throat and Nose
Frank Dyer Sanger, M.D.	Professor of Diseases of the Throat and Nose
George W. Mitchell, M.D.,	Associate Professor of Diseases of the Throat and Nose
George Murgatroyd, M.D.	Associate in Diseases of the Throat and Nose
W. F. Quinn, M.D.	Associate in Diseases of the Throat and Nose
Frank B. Anderson, M.D.	Instructor in Diseases of the Throat and Nose
R. F. McKenzie, M.D.	Assistant in Diseases of the Throat and Nose

Third Year. Clinical Lectures. One hour each week throughout the session. Drs. Looper and Sanger.

Fourth Year. Dispensary instruction daily in small sections at the University and Mercy Hospitals. Ward classes one hour each week at the University and Mercy Hospitals.

GENITO-URINARY DISEASES.

Anton G. Rytina, A.B., M.D.	Professor of Genito-Urinary Diseases
Harris Goldman, M.D.	Associate in Genito-Urinary Diseases
W. H. Toulson, M.D.	Associate in Genito-Urinary Diseases
A. J. Gillis, M.D.	Instructor in Genito-Urinary Diseases
Wilford A. Councell, M.D.	Instructor in Genito-Urinary Diseases

Amos F. Hutchins, M.D	Assistant in Genito-Urinary Diseases
L. K. Fargo, M.D	Assistant in Genito-Urinary Diseases
Austin H. Wood, M.D	Assistant in Genito-Urinary Diseases
Howard L. Tolson, M.D	Assistant in Genito-Urinary Diseases

Instruction in Genito-Urinary Surgery is given to the members of the senior class, from both a practical and didactic standpoint. The course includes everything pertaining to modern urology, such as urethroscopy, cystoscopy, ureter catheterization, renal functional tests, X-ray, pyelography, blood urea estimations, etc. The teaching consists of clinics in the amphitheatre, ward rounds, and attendance by members of the senior class upon out-patients in the dispensary. In the latter department there were about 30,000 visits made during the past year. Ample facilities are afforded the students to see a large variety of every type of venereal disease. They are first instructed in the method of taking a genito-urinary history, are shown the technique of urethroscopy, cystoscopy, urethral instrumentation, rectal massage, demonstrations of the spirocheta pallida, and administration of Salvarsan.

DISEASES OF THE COLON AND RECTUM.

G. Milton Linthicum, A.M., M.D.,	Professor of Diseases of Rectum and Colon
Charles F. Blake, M.D	Professor of Diseases of Rectum and Colon
J. Dawson Reeder, M.D.,	Associate Professor of Diseases of Rectum and Colon

Fourth Year. This course is for instruction in diseases of the Colon, Sigmoid Flexture, Rectum and Anus, and will cover the essential features of the Anatomy and Physiology of the large intestine, as well as the various diseases to which it is subject. The importance of diseased conditions and malpositions of the intestines, in relation to systemic disturbances, will be emphasized by demonstrations.

In small groups, the students will be taken into the wards and dispensaries of the University and Mercy Hospitals, where different phases of the various diseases will be taught by direct observation and examination. The use of the proctoscope and sigmoidoscope in examination of the rectum and sigmoid will be made familiar to each student.

A course in Proctoscopy may be given in the City Hospitals at Bay View, where abundance of material is always obtainable.

DEPARTMENT OF OBSTETRICS.

J. M. H. Rowland, M.D	Professor of Obstetrics
L. E. Neale, A.M., M.D., LL.D	Professor of Obstetrics
Bernard Purcell Muse, M.D	Professor of Clinical Obstetrics
Charles E. Brack, M.D	Clinical Professor of Obstetrics
J. McF. Bergland	Associate in Obstetrics
H. S. Gorsuch, M.D	Associate in Obstetrics
L. H. Douglass, M.D	Associate in Obstetrics
F. H. Machin, M.D	Assistant in Obsterics
J. G. M. Reese, M.D	Assistant in Obstetrics
Susanne R. Parsons, A.M., M.D., Ph.D	Assistant in Obstetrics
Dudley Pleasants Bower, B.A., M.D	Assistant in Obstetrics
Stanley W. Matthews, M.D	Assistant in Obstetrics

Third Year. Three lectures and recitations each week by Drs. Neale and Rowland to entire class.

Manikin Work. Drs. Brack and Douglass, to sections of class at Mercy and University Hospitals.

Fourth Year. *Clinical Conference.* One hour each week for one semester to University Hospital section. Drs. Rowland and Neale.

Ward Classes. Six hours per week for five weeks to section of class at University Hospital. Drs. Rowland and Douglass.

DEPARTMENT OF GYNECOLOGY.

William S. Gardner, M.D	Professor of Gynecology
J. Mason Hundley, M.D	Professor of Clinical Gynecology
W. B. Perry, M.D	Professor of Clinical Gynecology
Hugh Brent, M.D	Associate Professor of Gynecology
Abraham Samuels, M.D	Associate Professor of Gynecology
Geo. A. Strauss, M.D	Associate in Gynecology
R. G. Willse, M.D	Associate in Gynecology
T. K. Galvin, M.D	Assistant in Gynecology
Jack M. Hundley, M.D	Assistant in Gynecology

Third Year. *Didactic Work.* A course of thirty lectures and recitations in the second semester.

Clinical Work. Six hours weekly for one trimester. In this course a student writes the clinical history of each patient in the ward, makes a general physical examination, including the blood and urine, before the patient is brought before the class. One student under supervision gives the anesthetic, a pelvic examination is made by six students, and any operation required is then done before a section of the class small enough to see clearly what is being done and how it is done. On a subsequent day the whole group examine microscopically sections prepared from material removed from patients that have been before them.

DEPARTMENT OF OPHTHALMOLOGY AND OTOLOGY.

Harry Friedenwald, A.B., M.D.	Professor of Ophthalmology and Otology
J. W. Downey, M.D.	Clinical Professor of Otology
Clyde A. Clapp, M.D.	Associate Professor of Ophthalmology
M. Randolph Kahn, M.D.	Associate Professor of Ophthalmology
H. K. Fleck, M.D.	Associate in Ophthalmology
Joseph I. Kemler, M.D.	Associate in Ophthalmology
E. A. Knorr, M.D.	Asssociate in Ophthalmology

Third Year. *Course in Diseases of the Eye*, October 2nd to January 18th. Dr. Harry Friedenwald.

Course in the Diseases of the Ear, October 2nd to January 18th. Dr. Downey.

Practical Course in Ophthalmoscopy, once weekly, in sections. Drs. Fleck and Kemler.

Fourth Year. *Clinics in Diseases of the Eye and Ear*, weekly. Drs. Harry Friedenwald and Downey.

Ward Studies of ocular and aural lesions associated with general medical diseases, once weekly in sections. Drs. Clapp and Downey.

Dispensary Instruction, daily in small sections. Drs. Kahn and Knorr.

The courses in Ophthalmology and Otology are designed to familiarize the students with the common diseases of the eye and ear, their recognition and treatment, with a view to meet the needs of the general practitioner. Special emphasis is laid upon the relation between diseases of the eye and the ear and systemic diseases and diseases of other organs.

FIRST YEAR SCHEDULE—FIRST SEMESTER.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 9 to 10.	Histology and Embryology Laboratory.				Histology.	Dissecting.
10 to 11.					Embryology.	
11 to 11.30.	Transfer.	Histology.	Transfer.	Histology and Embryology Laboratory.	Transfer.	
11.30 to 12.	11.30 to 12.30. Physiology.		11.30 to 12.30. Physiology.		11.30 to 12.30. Physiology.	
P. M. 12 to 1.		Lunch and Transfer.		Lunch and Transfer.		
1 to 2.	Lunch.		Lunch.		Lunch.	
2 to 5.	Anatomy and Dissecting.					

Classes in Anatomy, Dissecting, and Physiology at Lombard and Greene Streets; all other classes at Calvert and Saratoga Streets.

FIRST YEAR SCHEDULE—SECOND SEMESTER.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 8.30 to 9.30.	Histology and Embryology Laboratory.				Bacteriology	Dissecting.
9.30 to 10.30.					Embryology.	
10.30 to 11.30.	Physiology.	Histology	Physiology.	Bacteriology	Physiology.	
11.30 to 12.00.	Lunch.					
P. M. 12 to 2.	Bacteriology. Laboratory.					
2 to 2.30.	Transfer.					
2.30 to 5.30.	Anatomy and Dissecting.					

Classes in Anatomy and Dissecting at Lombard and Greene Streets; all other classes at Calvert and Saratoga Sts.

SECOND YEAR SCHEDULE—FIRST SEMESTER.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
A. M. 8.30 to 9.30.	Physiology.	Laboratory. Physiology, Section A. Biological Chemistry, Section B.	Physiology.	Laboratory. Physiology, Section B. Biological Chemistry, Section A.	Pharmacology.	Physiology.
9.30 to 10.30.	Biological Chemistry.		Biological Chemistry.		Biological Chemistry.	Pharmacology
10.30 to 11.30.	Pathology.		Pharmacology		Pathology.	Pathology.
11.30 to 12.30.	Lunch.	Lunch and Transfer Period.				
P. M. 12.30 to 1.30.	Laboratory.	Laboratory.	Laboratory.	Immunology.	Immunology.	
1.30 to 2.30.	Pharmacology	Immunology and Serology	Immunology and Serology	Surgery.	Medicine.	
2.30 to 3.30.				Surgical Anatomy.	Surgical Anatomy.	
3.30 to 4.30.	Neural Anatomy.	Surgical Anatomy.	Surgical Anatomy.			
4.30 to 5.30						

Classes on Tuesdays, Wednesdays, Thursdays and Fridays from 12.30 to 5.30, at Calvert and Saratoga Streets; all other classes at Lombard and Greene Streets.

SECOND YEAR SCHEDULE—SECOND SEMESTER.

A. M. 8.30 to 9.30.	Physiology.	Laboratory: Physiology, Section A. Biological Chemistry, Section B.	Physiology.	Laboratory: Physiology, Section B. Biological Chemistry, Section A.	Pharmacology	Physiology.
9.30 to 10.30.	Biological Chemistry.		Biological Chemstry.		Biological Chemstry.	Pharmacology
10.30 to 11.30.	Pathology.		Pharmacology		Pathology.	Pathology.
11.30 to 12.00.	Lunch.					Lunch.
P. M. 12 to 1.	Pathological Laboratory.					Medical Clinic
1 to 2.						Surgery.
2 to 3.	Laboratory: Pharmacology Section A. Biological Chemistry, Section B.	Laboratory: Pharmacology Section A. Physiology, Section B.	Physical Diagnosis.	Laboratory: Pharmacology Section B. Physiology. Section A.	Laboratory: Pharmacology Section B. Biological Chemstry. Section A.	
3 to 4.						
4 to 5.						

All classes at Lombard and Greene Streets.

THIRD YEAR SCHEDULE.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 8.30 to 9.30.	Medicine.	Pathology.	Therapeutics.	Surgery.	Pathology.	Surgery.
9.30 to 10.30	Pediatrics.	Surgery.	Obstetrics.	Medicine.	Therapeutics.	Medicine.
10.30. to 1.30.	Physical. Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis. Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis Operative Surgery. Dispensary. Lunch and Transfer.	Physical Diagnosis Operative Surgery. Dispensary. Lunch and Transfer.
P. M. 1.30 to 2.30.	Medical Clinic.	Obstetrics.	Section A. Clinical Medicine & Surgery, Gross Pathology, at Bay View. Section B. 1.30 to 2.30, Group Work in Ophthalmoscopy.	Obstetrics	Neurology	Gynecology.
2.30 to 4.30	Pathology Laboratory	Pathology. Laboratory.		Clinical Pathology Laboratory	Clinical Pathology Laboratory	Section B. Clinical Medicine & Surgery, Gross Pathology, at Bay View. Section A. 1.30 to 2.30, Group Work in Ophthalmoscopy.
4.30 to 5.30.	Preventive Medicine.	Eye & Ear—Oct. 2 to Jan. 18. Physical Therapeutics—Jan. 22-Feb. 22. Fractures—Feb. 26-May 31.		Eye & Ear—Oct. 2 to Jan. 18. Physical Therapeutics—Jan. 22-Feb. 22. Fractures—Feb. 26-May 31.	Preventive Medicine.	

From 10.30 A. M. to 1.30 P. M. the class is divided into two sections, one section reporting at Calvert and Saratoga Streets, the other at Lombard and Greene Streets.

Classes on Thursdays, Fridays, from 1.30 to 5.30, and Saturdays, 1.30 to 2.30, at Calvert and Saratoga Streets.

FOURTH YEAR SCHEDULE.

Hours.	Monday.	Tuesday.	Wednesday	Thursday.	Friday.	Saturday.
A. M. 8.30 to 11.00.	Ward Classes Medicine, Surgery, Obstetrics.	Ward Classes Medicine, Surgery, Gynecology.	Ward Classes Medicine, Obstetrics. Surgery, 10-11.	Ward Classes Medicine, Surgery Gynecology.	Ward Classes Medicine, Surgery,	Ward Classes Medicine, Surgery, Gynecology.
11.00 to 12.00.	Orthopedic Surgery.	Medical Clinic (University) Surgical Path. (Mercy)	Clinical Pathological Conference.	Surgical Clinic.	Medical Clinic.	Pediatrics Clinic.
P. M. 12.00 to 2.00.	Dispensary Lunch and Transfer	Dispensary and Lunch	Dispensary and Lunch and Transfer	Dispensary and Lunch	Dispensary, Lunch and Transfer.	Dispensary Lunch and Transfer.
2.00 to 3.00.	Dermatology Clinic (Full class at Univ. Hosp.)	Neurology Clinic	Eye and Ear Clinic (Full class at Univ. Hosp.)	Genito-Urinary Clinic (Mercy) Obstetrical Clinic (University Hosp.)	Gastro-Enterology Clinic. (Full class at Univ. Hosp.)	Psychiatry Clinic (Full class at Univ. Hosp.)
3.00 to 4.30.	Ward Classes Medicine. Urology. Eye & Ear.	Ward Classes Medicine. Proctology. Pediatrics.	Ward Classes Medicine. Nose & Throat. Obstetrics.	Ward Classes Medicine. Orthopedic Surgery. Obstetrics.	Ward Classes Medicine. X-Ray. Neurology.	
4.30 to 5.30.	Preventive Medicine.	Gynecology.			Preventive Medicine.	

The Senior class is divided into two sections, which report, one at Lombard and Greene Streets, the other at Calvert and Saratoga Streets, for one semester each, rotate at the end of the first semester on January 28, 1923.

Each section of the class is divided into three groups—Medical, Surgical and Special. These groups will rotate on the following dates:

FIRST SEMESTER.	SECOND SEMESTER.
1st period, Oct. 2 to Nov. 4.	1st period, Jan. 29 to Mar. 3.
2nd period, Nov. 6 to Dec. 9.	2nd period, Mar. 5 to Apr. 7.
3rd period, Dec. 10 to Jan. 27.	3rd period, Apr. 9 to May 26.

THE UNIVERSITY HOSPITAL TRAINING SCHOOL FOR NURSES.

MISS ANNIE CRIGHTON, R.N., *Superintendent of Training School.*

The University of Maryland School for Nurses, established in the year 1889 for the purpose of instructing women in the art of caring for the sick, is now entering its thirty-second year.

The University Hospital is a large general hospital containing about 250 beds, and is equipped to give young women a thorough course of instruction and practice in all phases of nursing work.

Unusual advantages are offered to student nurses because of the varied services and well-thought-out curriculum, taught by qualified instructors and members of the Medical Staff of the University.

The Nurses' Home is a new fireproof, modern building in every respect; single rooms for students, large reception and recreation rooms. The Laboratory and class rooms are also in this building and have been specially planned to answer the teaching needs of the student nurse.

Candidates wishing to obtain the course of instruction must apply personally or by letter to the Superintendent of Nurses. Those applying by letter should enclose a statement from a clergyman testifying to good moral character, and one from a physician certifying to sound health and unimpaired faculties. No candidate will be considered who is not physically fit. Applicants must not be under 19 or over 35 years of age. They must show that they have graduated from a high school or have the equivalent of such a degree of education. The Superintendent of Nurses decides as to the fitness of the candidate for the work and the propriety of dismissing or retaining them at the end of their probation term. She may also, with the approval of the Committee, dismiss a pupil from the school at any time for misconduct or inefficiency.

The course of instruction covers a period of three years.

Classes are admitted in February and March and September. Student Nurses are on duty eight hours during the day, and ten hours when on night duty, except during the first six weeks of the preliminary period, when four hours are spent in the wards and four hours in the classroom.

When the work will permit a half day is allowed on Sunday. The term of night duty is two months during each year.

Sickness: Pupils when ill will be cared for gratuitously. All time lost for sickness or any other cause must be made up. Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

Vacations: Vacations are given between June and September. A period of three weeks is allowed the student after the completion of the first and second years.

Examinations: Examinations are held after each course of study and lectures, and the standing of the student at the end of the year is based upon the results of these examinations and the general character of the work throughout the year.

The diploma of the school will be awarded to those who have satisfactorily completed the full term of three years and have passed successfully the final examinations.

GRADUATING CLASS OF 1922, UNIVERSITY HOSPITAL.

Student	Address
Cecile Marie DuBois	Maryland
Veronica Ellen Callaghan	Ohio.
Nettie Bradley Lord	Maryland
Mary Julia Deputy	Maryland
Grace Lovell Elgin	Maryland
Frankie Bowman Morrison	Pennsylvania
Lucile Love Bowie	Virginia
Isabelle Jamison Pannair	Virginia
Eva Louise Yeager	Maryland

THE MERCY HOSPITAL TRAINING SCHOOL FOR NURSES.

The Mercy Hospital Training School for Nurses, conducted by the Sisters of Mercy and connected with the College of Physicians and Surgeons, was organized and incorporated under the general laws of the State of Maryland in 1899. Its first students were graduated in 1901; and on the passage of the bill for registration in 1904 the Sisters of Mercy, connected with the Hospital service, received certificates as registered nurses.

The Training School was affiliated with the Board of Regents of the State of New York in 1906; and in the same year the Alumnae Association was incorporated, having been previously connected with the Associated Alumnae of the United States. The graduates, as active members, have been much interested in the movements of the Maryland Association of Graduate Nurses, to whom they have given every encouragement to uplift the profession in its many works of district nursing, tuberculosis campaign, Red Cross movements, etc.

The requirements for entrance are: Highest moral standing, health, intelligence and a High School education or its equivalent. The age limit is twenty to thirty-five years.

After a three months' probation, candidates, if they possess the necessary qualifications, are admitted to the Training School proper, receiving five dollars a month wherewith to secure textbooks, etc., the education they receive being considered their compensation. The right is reserved to dismiss pupils for any cause which may be deemed sufficient by the Sister Superior or Superintendent.

The course of training comprises three years of theory and practice. The clinical advantages are exceptional. The medical, surgical, orthopedic, gynecological, obstetrical, children's and dietetic departments give valuable practical experience. The nurses are taught the theory of nursing by class recitations and demonstrations by efficient Sister instructors. Supplementing this training is a course of lectures from the professors of the University of Maryland School of Medicine and College of Physicians and Surgeons, who are untiring in their efforts to keep the School abreast with modern scientific developments.

GRADUATES, 1922.

Name	Address
Sister M. Joan of Arc Wilson	Maryland
Mary C. Pottorff	Pennsylvania
Anne Baile Chenoweth	Maryland
Virginia Eleanor Geise	Maryland
Margaret Howard Dudley	Maryland
Elizabeth O'Donnell Streett	Maryland
Martha Elizabeth Flynn	Maryland
Anna Margaret Sheridan	Maryland
Catherine Frances Prenger	Mrayland
Emma Garrison Burdette	Maryland
Mary Gladys Scherer	Maryland
Georgia Seymour Harness	West Virginia
Catherine Spalding Donavan	Maryland
Rosa Brunsman	Maryland
Laura Augusta Greaver	Virginia
Helen Loretta Miller	Maryland
Burnetta Anna Heininger	Pennsylvania
Elizabeth Virginia Phelps	Maryland
Frances Boucher Donavan	Maryland
Mildred Kathryn Hoffman	West Virginia
Julia Buhrman	Pennsylvania
Mary Elizabeth Dempsey	Maryland
Elizabeth Glwendolyn Ruffli	Maryland
Helen Louise Blocker	Pennsylvania
Mary Sabina Breen	Ohio
Ruth Hallie Matthews	West Virginia
Eleanor Margaret Brubaker	Pennsylvania
Lillian Ann Smith	Pennsylvania
Helen Agnes Lyng	Maryland
Lillian Ann Todt	Pennsylvania

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I give, devise and bequeath to the Regents of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic..

(Here state amount or describe property.)

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I give, devise and bequeath to the Trustees of the Endowment Fund of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic...........

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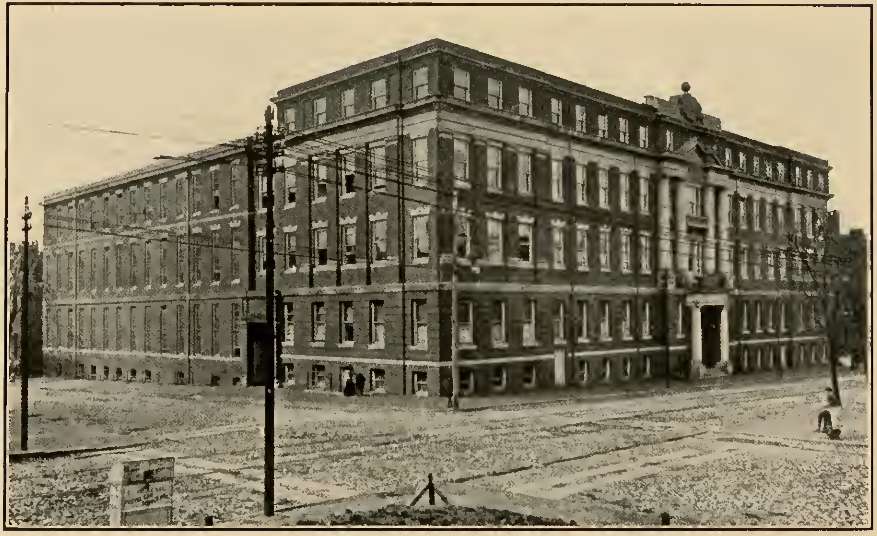

UNIVERSITY HOSPITAL.

COLLEGE OF PHYSICIANS AND SURGEONS AND MERCY HOSPITAL.

UNIVERSITY OF MARYLAND
BULLETIN
OF THE
SCHOOL OF MEDICINE

Vol. VII. OCTOBER, 1922. No. 2

SELECTIVE ANESTHESIA IN UROLOGY.*

Preliminary Report by A. G. Rytina, M. D., H. L. Tolson, M. D.

In the average surgical operation, the selection of the anesthetic is a matter of small moment. But in urological surgery, the type of anesthetic used may be a matter of the greatest importance.

For example, in the old prostatic, who may also be the subject of nephritic, cardiac, vascular or pulmonary disease, the selection of the right kind of anesthetic is more important than the method of operative procedure. There are four anesthetics commonly employed by urologists, viz., nitrous oxide, oxygen anesthesia, ether anesthesia, local anesthesia, and spinal anesthesia. What we say concerning anesthesia in urology, will be equally applicable to the other branches of surgery presenting like complications or conditions. The preference of the one over the other of the first two anesthetics, viz., gas and oxygen and ether anesthesia, is based on the fact, that gas and oxygen have little or no deleterious effect on the kidney or pulmonary systems, but a depressing effect on the cardio-vascular systems. Ether on the other hand has a stimulating effect on the cardiac apparatus, but a deleterious action on both the pulmonary and nephritic systems. It is easy, therefore, in the average case, to decide which of the two anesthetics ought to be the one of choice.

The anesthetics, however, which for us have the greatest interest, and which we regard as the most important, are local anesthesia and spinal anesthesia. It is to these two latter methods, and particularly spinal anesthesia, that we wish to address ourselves. In the brief time allotted us, we are only going to consider these anesthetics from the standpoint of the old prostatic. After trying every method of operative procedure for removal of the prostate, we are convinced in so far as our own experience is concerned, that the method offering the greatest hope of success is the two stage suprapubic prostatectomy.

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*From the Morrow Hospital.

Read at the Semi-Annual Meeting of the Medical and Chirurgical Faculty of Maryland. Held at University of Maryland, College Park. Md., Nov. 9, 1921.

In the last few years we have invariably done the first stage, viz., suprapubic cystostomy, under novocain anesthesia. The operation can be done by this method fairly rapidly, without pain or shock, and without disturbance to the pulmonary or gastric systems that often attend a general anesthetic. Having completed the first stage, the second stage can be done at the will of the surgeon, and for this stage we have of late come to prefer spinal anesthesia. Indeed, we believe that the technique which we are attempting to perfect will enable us, in a good percentage of cases, to perform a one stage prostatectomy, having all the advantages of the two stage prostatectomy, and none of its disadvantages.

In advocating spinal anesthesia in urology, we are fully aware that some of you have heard of it almost before we were born. We know that it has its limitations and we know that it has its dangers. We know it is not popular, and you will want to know the reason. We think the reason is two-fold. The first is technical and the second psychological. Any interne can give ether, but it requires special training and care to administer spinal anesthesia. The psychological reason is the inate dread which the surgeon has in puncturing the spinal canal. Our initial confidence in spinal anesthesia was begotten by ten years experience with the lumbar puncture, and treatment of neuro-syphilis by intraspinous injection of mercurialized and salvarsanized serum. In all that time, we have not seen one case of infection, have not had a death or permanent paralysis.

Our technique of spinal anesthesia briefly is as follows: The patient is prepared as for an ordinary lumbar puncture. An intraspinous needle, size 18, is introduced in mid line in the 2nd, 3rd, or 4th interspinous space, the skin being previously anesthetized by a solution of ethyl chloride. 2 cc. of spinal fluid are withdrawn and a 10 cc. Luer syringe containing 1¼ gr. of Apothesine, dissolved in 2 cc. of freshly distilled, sterilized water is attached to the needle. 2 cc. of spinal fluid are allowed to enter the syringe either by slight suction, or by spinal fluid pressure. The whole is then gradually introduced into the spinal canal. The patient is now turned on his back, with his head and shoulders slightly elevated. Five minims of adrenalin and 1/30 gr. of strychnine and 4 gr. of caffeine are now given hypodermically. An infusion apparatus, consisting of salt solution and adrenalin are close at hand in case the blood pressure falls too low. Symptoms of respiratory disturbance may be sufficiently marked to call for artificial respiration, but we have not yet met them. Having attended to all these preliminaries, the field of operation is prepared in the regular manner, and the operation proceeded with. The anesthetic effects begin almost immediately, and last from one-half to one and one-half hours (½-1½ hours), depending on the size of the dose used.

In conclusion, let us analyze the following case, in order to show the merits of spinal anesthesia:

Dr. W., age 82, entered Mercy Hospital on October 5, 1921, suffering with uremia and complete retention of urine. He was referred from Dr. Chambers' service to the Urological Service. Examination showed the patient to be markedly debilitated, with some cardiovascular and pulmonary, as well as kidney disturbances. Rectal examination showed an enormously enlarged prostate, and the catheter withdrew about two quarts of residual urine. After careful treatment, the uremia disappeared. Patient, however, was still very weak and was considered an extremely poor operative risk. Economic and sentimental reasons prompted me to attempt a suprapubic drainage under novocaine anesthesia ½ of 1%. Following this operation, patient's general condition markedly improved. In 14 days the second stage operation was performed under spinal anesthesia. To remove the very large prostate weighing 165 grams, complete anesthesia was necessary. The objections to ether or gas and oxygen were three-fold:

1. The great danger of pneumonia or cardiac complications.
2. The great danger of gastric disturbance.
3. The great danger of shock from hemorrhage.

It was accordingly decided to remove the prostate under spinal anesthesia. There was complete absence of pain, and owing to the low blood pressure, which is characteristic, there was practically no bleeding, in contrast to ether which raises the blood pressure, and accentuates the hemorrhage. There was also complete adbominal relaxation, which not only made manipulation easier but did away with the danger of rupturing the peritoneum, as occasionally occurs with light ether or gas anesthesia. The patient returned to his room in good condition, was stimulated, and 24 hours later was sitting up in bed reading the newspaper and munching on candy. His convalescence since has been uneventful, and patient is now well.

Up to this time, we have records of nearly three hundred cases operated upon under spinal anesthesia. These operations were nearly all done at the Morrow Hospital, a few at the Mercy Hospital, and one at South Baltimore General Hospital. The operations consisted of the following examples: Circumcisions, Epididymotomy, Adenectomy, Suprapubic Drainage, Suprapubic Prostatectomy, Nephrectomy, Herniotomy, External Urethrotomy, Appendectomy, Osteomyelitis of Leg, etc. We have not had one death in the series, and on account of the absence of shock, the convalescence is not only better but shortened. We have had only one slight complication, viz., a transient paralysis of the external rectus. A more complete report concerning our experiences will be forthcoming in a future communication.

AN ANALYTICAL STUDY OF THE EXTRACRANIAL ANEURISMS OF THE INTERNAL CAROTID ARTERY RECORDED BY AMERICAN AUTHORS.

By Nathan Winslow.

(From the Surgical Department of the University of Maryland.)

Aneurism of the cervical portion of the internal carotid artery is uncommon. From 1808, when Cooper[1] ligated the common carotid, successfully, for such an aneurism until the present day a most careful seach of the literature reveals only 101 cases. These will appear in a series of articles in the Bulletin in abstract form and analytical tables. The first paper will be devoted to those contributed by American authors. They number 20. Later issues will contain those of spontaneous origin, 39 in number; erosive, totaling 18; traumatic, numbering 25; arterio-venous, 18; and finally 1 which could not be classified[2] as it was found in the dissecting room. The diagnosis is mainly between abscess, rarely malignancy. Usually the first intimation of its presence is a bulging in the vicinity of the tonsil. For this reason its prompt recognition, when it does occur, is of the utmost importance, else it may be lanced for a tonsillar abscess, with fatal result. A carefully taken history may prevent this mistake. Mudd,[3] from the history of the swelling in the throat antedating a scarlatinal angina, was led to a correct diagnosis. Agnew[4] stresses the ability of the physician to both see and feel pulsation. He overlooks, however, the possibility of the patient being unable to open the mouth sufficiently for an ocular inspection or to permit the passage of a finger. Pircher[5] saw a girl, aged 8, with a swelling under the angle of the jaw which prevented the patient from opening her mouth. He took it for an abscess and attempted, unsuccessfully, to reach the pus by an incision in the neck. Notwithstanding the failure, the patient began to improve and was apparently on the road to recovery, when without warning there was a mortal hemorrhage from the mouth. Autopsy revealed a ruptured aneurism as the source of the bleeding. Fortunately the symptoms are not always so abscure. There is a bulging of the lateral pharyngeal wall into the fauces; and the alimentary tract is but a narrow slit. The swelling may be either circumscribed or diffuse. To touch it is soft and elastic and pulsates in an expansile manner throughout its entire extent. Externally there may be no evidence of the disease; or there may be a fullness; or there may be a distinct lump behind the angle of the jaw. If a stethoscope be placed over the swelling a bruit is heard. Both murmur and pulsation disappear when the common carotid artery is compressed against the vertebral column, to reappear immediately upon the release of the compression. Its size is visibly decreased by the arrest of the circulation. The patient may complain of a roaring in the ear, persistent and severe hemicrania, vertigo and weakness. Swallowing of solids is sometimes impossible and generally accomplished with difficulty. Liquids may be regurgitated through the nose. Dyspnoea is a not uncommon complaint. Hoarseness and deviation of the tongue toward the affected side have been noted. Diagnostic puncture has been employed but should not be practised unless the patient is so situated that a prompt ligation of the common or internal carotid can be done in the event of rupture through the path of the needle. Even in the presence of aneurism aspiration may prove inconclusive from the entanglement of the bore of the needle in clot, a dry draw resulting. Both operating and autopsy findings show that aneurism of the internal carotid does not invariably point in the throat. Moser[6] tells of a woman who sought relief for a swelling in the right side of the neck which pulsated synchronously with the heart. Though nothing abnormal was seen in the throat, at operation an aneurism was found arising from the internal carotid. In isolated instances pulsation is absent or so weak as to escape detection. Dubrueil[7] diagnosed a case of this sort, sarcoma, and attempting enucleation tore the sac. Ligation of the common carotid stopped the hemorrhage, but the patient died 14 days later of hemiplegia. Like mistakes in diagnosis are only to be avoided by the exercise of unusual care.

Almost without exception have those surgeons who have adopted a waiting policy been rewarded with a mortal hemorrhage from rupture of the sac into the mouth. 'Tis true several instances of spontaneous cure[8] have been reported. These are the exceptions not the rule. Were this aneurism more accessible restorative aneurismorrhaphy would be the ideal treatment. In the arterio-venous type it has been employed a few times with satisfaction. In the arterial type it has been tried out once.[9] This patient died of a secondary hemorrhage. The operation of choice is ligation of the internal carotid proximally.[10] When this is impossible both the common and the external carotids should be tied, as well as any branches of the latter arising between the site of ligation and the bifurcation. By adopting this plan the reestablishment of pulsation in the sac is prevented. Before permanently arresting the circulation in the internal carotid it is recommended the common carotid be temporarily occluded under local anesthesia. Usually a defective cerebral circulation will promptly manifest itself.[11] In the face of these warnings the ligation should be removed without delay.

CASE.*

The patient, a negress; married; aged, 48; cook; was admitted to the University Hospital January 24, 1921, for a rt. unilateral pharyngeal swelling of 9 months' duration. In April, 1920, she con-

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*Reported in Annals of Surgery, 1922, LXXV, 694.

TABLE No. 1—Continued.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Operation, Date.	Cured.	Died, Cause.	Type.	Remarks.
5	Hulbert: St. Louis Courier Med., 1886, XVI, 265.	F 19 R	......	Lig. C. C. A.	....	On table from rupture of sac into mouth and asphyxia.	S	The diagnosis was rendered obscure because the pt. had a severe scarlatinal pharyngitis and a swelling in the rt. parotid region. She had on one occasion lost a pint of blood from the vicinity of the rt. tonsil, still tonsillar abscess was suspected and puncture made ten cc. of blood escaping, no pus. Two days later upon aspirating pure blood, diag. was changed to aneur. Pulsation was present, but no bruit or thrill. It was now learned that the lump antedated the tonsillitis. An emergency lig. had been thrown around the common carotid and an attempt made to expose the internal carot. During the effort the pt. ceased breathing and blood gushed from her mouth. The provisional lig. around the C. C. A. was quickly tied; as the pt. failed to respond, a tracheotomy was made and artificial respiration done, but to no purpose. The diagnosis was confirmed by autopsy.
6	Agnew: Trans. Amer. Surg. Assoc., 1886, IV, 252.	F Woman	8 months.	1st op.: Lig. C. C. A., S. T. A. & L. A.; puls. disappeared, to return 2 weeks later. 2nd op.: Lig. opposite C. C. A. In 1883.	....	8 days after 2nd op. of sepsis and secondary hem. from rupture of sac.	S	Tumor as large as an orange just beneath and behind the angle of the jaw, and another projecting into the pharynx. It had grown slowly. Pressure on the C. C. A. caused the swelling to shrink. It pulsated throughout and had a bruit. No cause. After second op. no sound or motion detectible; lump became quite solid. Shortly thereafter ruptured into the mouth; hem. controlled by packing the cavity of the sac with gauze.
7	Keen: Times & Reg., Phila., 1894, XXVII, 151.	M 23 L	3 years.	Lig. C. C. A., E. C. A. & I. J. V. 8-15-1893.	Yes.	....	AV.	Shot 3 years before, the ball entering just below the tip of the left mastoid process; unconscious for a brief time; next day blind in rt. eye, rt. arm paralyzed. When seen Aug. 9, 1893, he had contractures of the rt. arm, aneurismal bruit, thrill felt down the lt. side of neck, slight external swelling, ear noises preventing work. Post-operative, no mental disturbances, slight ptosis; discharged mid. Sept., 1893, cured.
8	Mayo, C. H.: St. Paul Med. Jl., 1899, I, 751.	F 23 R	6 years	Lig. C. C. A. 8-2-1899.	Yes.	....	S	Admitted to hosp. July 31, 1899, for a mass which crowded the rt. pharyngeal wall to the mid line. Externally the lesion presented beneath the ear and rt. jaw. Pressure caused it nearly to disappear. The mass pulsated. Bruit was heard. The rt. half of the tongue was atrophied.

9	Cushing in Callander, Johns Hopkins Hosp. Reports, 1921, XIX, 301.	M 28 R	Not given.	Lig. I. C. A. 1905.	Yes.	....	AV.	Admitted to hosp. May 5, 1905, for roaring and buzzing in rt. ear, bruit, exophthalmos, diplopia, deafness in both ears, venous pulsation. Lesion attributed to an injury. After 4 years improvement.
10	McMullen & Stanton, Ann. of Surg., 1910, LI, 76.	F 60 R	1 year.	Endoaneurismorrhaphy. 12-29-1908. 20 days later packing of sac with gauze for secondary hemorrhage.	....	20 days after op., from hem. due to sloughing of flaps of aneur. sac.	S	Painless, pulsating, steadily developing mass in rt. side of neck, no nerve involvement, no cerebral symptoms, no specific history, usual signs of aneurism, tumor in the throat. The aneur. was exposed and the int. car, clamped above and below the sac, which was opened longitudinally and some clotted blood removed. Continuity of the artery restored by 4 rows of through and through vaseline impregnated silk sutures. On turning the blood into the artery there was only moderate hem. from the stitch holes, easily controlled by pressure. The vessel pulsated normally, no drainage used, no bad effects from the 25 minute compression. Post-operative course was uneventful until the 8th day, when a swelling appeared in the region of the wound from which was evacuated a serosanguinous fluid. Pt. discharged on the 15th day apparently cured. Three days later a hematoma formed beneath the scar, opened and drained. On the 20th day after op. the hematoma had reformed, wound reopened with alarming hem. ensuing, for the arrest of which the common car. was clamped; this showed the bleeding to be chiefly from above. Attempts to clamp the int. car. were unsuccessful, owing to the friability of the tissues. Bleeding ultimately controlled by gauze packing. Patient failed to rally and died in a few hours. No autopsy permitted.
11	Shipley & Lynn: Jl. A. M. A., 1916, LXVI, 1602.	F 41 L	About 2 years.	Lig. C. C. A. & E. C. A. 1-31-1915.	Yes.	....	S	White woman, admitted to the University Hosp., Balto., Jan. 11, 1915, for a bulging in the lt. side of her throat which was producing an increasing dyspnoea and difficult deglutition; but slight evidence of the mass externally. Its inner surface was smooth elastic to the touch and pulsated throughout. A bruit was heard. The post-operative course was smooth. At no time after op. was there any circulatory disturbance referable to the brain. No cause could be found for the lesion. She denied luetic infection, which statement was confirmed by a negative blood Wassermann. X-ray of the neck did not reveal any cervical bone disease. She had never had any throat trouble. Six months after lig.

TABLE No. 1—Continued.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Operation, Date.	Cured.	Died, Cause.	Type.	Remarks.
								pulsation returned, but in weaker form There were no cerebral symptoms at or after op. The pt. is still alive (September 15, 1922) and symptomatically cured.
12	Heuer in Callander, Johns Hopkins Hosp., Reports, 1921, XIX, 302.	M 48 R	......	Aluminum band to the I. C. A., almost obliterating its lumen. 1917.	Yes.	....	AV.	Pt. admitted to the hospital March 9, 1917, for dimness of vision, murmur, deafness in the rt. ear, rt. exophthalmos, following a trauma.
13	Ransohoff: Ann. of Surg., 1918, LXVIII, 152.	F 16 L	8 days.	Lig. C. C. A. under gas. 1-20-1918. The same evening on account of compression of the larynx by a hematoma, a tracheotomy was done under local anesthesia.	Yes.	....	E	Pt. had a septic sore throat, complicated with lt. suppurative adenitis. Eight days before admission the swelling was incised, and 3 days before a hemorrhage occurred from the drainage tract. This was repeated with great severity Jan. 20, 1918, compelling the girl to come to the hosp. When the throat was examined a swelling was seen in the lateral wall of the phraynx as large as a peach, elastic and distinctly pulsating. Compression of the C. C. A. caused the motion to cease. Before the vessel was tied the pt. was permitted to come partially from under the anesthetic. As no evil consequences arose the operation was completed. Three months later the pt. was entirely well. There had been no return of the temporal pulse.
14	Winslow, N.: Ann. of Surg., 1922, LXXV, 694..	F 18 R	9 months.	Lig. C. C. A. & E. C. A. 2-1-1921.	Yes.	....	S	Swelling in the region of rt. tonsil, lanced by a local physician for abscess, blood alone escaping. Lump gradually grew larger, causing dysphagia and dyspnoea, pulsated, systolic blow. Externally, puffiness behind angle of jaw. The beats in the swelling ceased with the tying of the lig. At no time either at or after op. did any distressing symp. arise. Pt., May 22, 1922, showed no evidence of the aneurism.

S = spontaneous.
T = traumatic.
E = erosive.
AV = arterio-venous.

C. C. A. = common carotid artery.
I. C. A. = internal carotid artery.
E. C. A. = external carotid artery.

S. T. A. = superior thyroid artery.
L. A. = lingual artery.
I. J. V. = internal jugular vein.

TABLE No. 2.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Cured.	Died, Cause.	Type.	Remarks.
15	Lee in Fenger & Lee, Gaillard, Med. Jl., 1882, XXXV. 10.	M 28 R	10 days	....	Immediately of hem. mistaken for abscess and lanced.	T	Bullet wound rt. infraorbital region, no hem., subsequently swelling in the parotid region. 15 days after the accident the wound had entirely healed, leaving behind a swelling of the hard and soft palate. At this time he called at Lee's office and complained of inability to speak or swallow and a severe pain in the right side of the neck. With considerable difficulty he opened his mouth sufficiently for a limited inspection. Tonsils and soft palate so swollen as to preclude inspection of the pharynx. On the hard palate there was a small, firm tumor about the size of a hickory nut. Thinking it the ball surrounded by inflammatory products, Lee made an exploratory incision. There was a gush of bright red arterial blood, accompanied with a peculiar hissing noise. Attempts to stanch the flow of blood with compresses were frustrated by the struggles of the patient, who died in a few minutes. Autopsy confirmed the diagnosis of aneurism, incurred from pistol shot wound, Sept. 30, 1879.
16	Coomes: The Medical Herald, 1885, VII, 503.	F Woman L	10 days	....	10 days after 1st visit of hem. & exhaustion.	S	A white female, courtesan, was first seen. Dec. 14, 1885, for a severe hemorrhage from the mouth and nose. At that time there was no evidence of an open surface in the nose, mouth, pharynx or larynx. The pt. stated she had never had syphilis. Further exam. failed to elicit any evidence of lues. She had had two other attacks of a similar nature, five and ten days previously, respectively. She complained of pain in the lt. ear, but exam. failed to detect anything abnormal. There was some puffiness of the external portion of the neck on the lt. side and quite a protrusion into the pharynx which had much the appearance of an abscess. Coomes had first intended putting a knife into it, but sticking a finger into the mouth he found its surface hard and unyielding. The cutting was therefore abandoned, and, the Doctor relates, "It was fortunate for me that I did not cut, for I certainly would have had a funeral at once." Externally, no pulsation could be felt. He was at a loss to explain where the blood came from, but hesitated to disturb the clot in the pharynx. The patient rallied, but on Dec. 19, 1885, had another hem. which reduced her to extremis. Dec. 23, pulsation was discovered, thus determining the nature of the lump and of the hemorrhaging. That night the hem. recurred and, despite pressure on both com. carotids, the patient expired. Autopsy revealed an aneur. of the extreme upper portion of the int. car. The sac extended from the angle of the jaw to within a sixth of an inch of the exterior of the skull. In conclusion, Coomes said, it may be safely said no amount of surgical interference could have done any good in this case, because it was with the greatest difficulty the dissection could be made far enough up to sever the artery above the sac. This being the case, it would have been impossible to have placed a ligature around the vessel at that point. He was sure anyone observing the case would have judged it an abscess of the tonsil, and would have been strongly tempted to put a knife into it. Although pulsation could be felt, at no time could it be seen.
17	Vander Veer: Trans. Amer. Surg. Assoc., 1886, IV, 253.	M 40 L	2 months	....	About 3 months after first treatment suddenly.	S	Swelling occupying the lt. side of the pharynx and extending to the median line, pulsation, bruit. Compression of the C. C. A. lessened its volume. Compression of the common carotid for 6 days visibly affected the size of the tumefaction. Pt. then insisted upon returning to his home, but was compelled to report back about 6 weeks later on account of a return of the mass. It was now as large as before the compression treatment, and pulsated throughout. Compression again resorted to, apparently successfully. Again the pt. left for home, but 5 weeks thereafter was seized with a severe pain in the head and fell over dead. Autopsy revealed an aneurism of the int. car. artery, but not the cause of death.

TABLE No. 2—Continued.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Cured.	Died, Cause.	Type.	Remarks.
18	Richardson: Jl. A. M. A. 1890, XV, 180.	F 35 R	Short time	Unimproved	....	S	Pt. presented a bulging mass in the rt. side of the throat, which pulsated synchronously with the heart and exhibited a high pitched bruit. Compression to the C. C. A. caused a decrease in its volume and complete cessation of pulsation. The blood seemed to be just beneath the mucous surface, and it appeared with each pulsation the swelling must rupture. The pt. noticed the pulsation herself and stated the thumping was very annoying. Efforts to induce the pt. to appear before the Medical Society of the District of Columbia drove her away. Further progress of pt. not stated.
19	Booth: Phila. Med. Jl., 1900, VI, 1002.	M 25 L	18 days	....	10 days hem.	T	Pt. seen by a number of physicians, most of whom were disposed to the diag. of peritonsillar abscess. The trouble began Jan. 1, 1900, and was diagnosed chronic quinzy complicated by hem. Pt. was seen by Booth, Jan. 8, 1900, who realized he was dealing with an unusual condition. There was a mass in the lt. tonsillar region, extending to the middle of the pharyngeal cavity and upward toward the naso-pharynx and downward to the larynx. High up on the mass was a hemorrhagic spot. Previous to the call on Booth, a physician had packed the posterior nares, but the string broke while removing the tampon. On Jan. 20, 1900, under general anesthesia the plug was removed, also a piece of tissue. The pathological report was chronic inflammation, no evidence of malignancy. Between Jan. 18 and 28 there were repeated and severe hemorrhages. There was never any apparent pulsation in the lesion, which was hard and firm to the touch. It was painless. On Jan. 29 a profuse hemorrhage proved fatal in a few minutes. The author considered the case a traumatic aneurism from a severe injury received two years previously in a bicycle collision while coasting. Autopsy revealed the presence of an aneurism of the internal carotid artery.
20	Johnson: Trans. of the 7th meeting of the Amer. Laryng., Rhinol. & Otol. Soc., 1901, VII, 226.	M 4 L	10 days	....	5 months hemorrhage.	E	Quite a number of physicians had seen the pt., most of whom believed it an abscess. In fact, the pt. had been prepared for an incision, which was desisted in on account of the unruliness of the child. The history was a sore throat for ten days, fever, pain and a swelling in the tonsillar region. It is stated that a midwife had even attempted to scratch a hole into the mass with her finger nail. Shortly afterwards the ear commenced to discharge blood and a physician was summoned. The progress not proving satisfactory, Johnson was called in consultation, March 15, 1900. The auditory canal was now completely closed by a pulsating mass. There was present also a tense swelling in the upper part of the neck in which no pulsation could be seen or felt, nor bruit heard. Internally, there was a tumor occupying the left tonsillar region. This was tense, red, and easily compressible. The lesion was diagnosed aneurism of the internal carotid artery. The case drifted out of Johnson's hands, and was not seen again by him until June 11, 1900. The pt. was now dyspnoeic, drowsy and stupid. The swelling was now much larger. The tonsil was removed and a tracheotomy done. From this period until Sept. 7, the pt. was in fair shape and apparently improving, but on that day the aneurism ruptured into the mouth, and continued to ooze blood until Sept. 11, 1900, when the child died.

into the mouth. Hulbert aspirated the sac for diagnostic purposes. This procedure is questionable, and the surgeon bold enough to attempt it, should be prepared to do immediate ligation of either the common or internal carotid. Spontaneous rupture occurred four times. All of these patients perished. Rupture of the sac after operation occurred three times. All of these patients eventally died. Both common carotids were tied by Agnew, but unsuccessfully. The causes of death were, disorganization of the brain, hemorrhage following puncture, thrombosis of the rt. lateral sinus, spontaneous hemorrhage four times, secondary hemorrhage, septic poisoning and no assignable cause. Cerebral symptoms after operation were present in one. In one, no appreciable bruit or pulsation could be elicited. Besides the cases tabulated Deaver has reported an aneurism involving all three carotids, Matas, a case, very suggestive of aneurism of the internal carotid and Ott a case in which both the internal and external carotids participated in the formation of the aneurism.

Deaver (The Univ. Med. Mag., 1889, 1, 340): The trouble had begun 20 years prior as a complication of rheumatism; at which time it was pronounced an enlarged tonsil. The tonsil was excised and the base repeatedly cauterized but the lump continued to increase in size. When the patient consulted Deaver the mass had attained the size of a man's fist and presented bcth internally and externally. It pushed the right pharyngeal wall inwards and so diminished the calibre of the pharynx as to prevent swallowing of solids, and caused great discomfort in breathing. It pulsated strongly both on the inside and on the outside and in both localities an aneurismal bruit was distinctly heard.

Operation 9-25-1888. The common carotid was tied in the inferior carotid triangle. During the induction of narcosis the man ceased breathing and became cyanosed and pulseless. The ether was withdrawn and artificial respiration instituted without avail, so laryngotomy was done. Resuscitation was now only a matter of a few moments and the operation was continued to completion. All three of the carotids were involved. The port-operative course was uneventful.

Matas (New Orleans Med. and Surg. Jl., 1884, XXII, 245): Logan and Souchon believed this case an aneurism of the internal carotid while Matas even two years after operation was inclined to look upon it as a fibro-adenoma of the tonsil, notwithstanding it had clinically all of the usual signs of aneurism. The pt., a white man, aged 35, complained of dysphagia, inability to eat, to speak and to breathe properly on account of a large mass which nearly filled his throat. Six years previously the man had had an acute inflammation of the throat complicated by swelling and huskiness of the voice which his medical attendant thought necessary to lance but without apparent result. From that time the swelling in the throat had continuously but gradually increased to its present size. Externally was noticed an irregular ovoidal mass which filled the submaxillary and parotid regions. It extended from the ear to the hyoid bone, felt very hard and pulsated vigorously. Inside the mouth was seen a large bulging mass that projected into the fauces from the rt. tonsillar region. Intrabuccal palpation confirmed pulsation of the whole mass. There was only a narrow passage left for food and drink and the man was compelled to subsist on semi-solid or liquid diet. The uvula and the palate were displaced to the left. Compression of the common carotid caused arrest of all pulsation and some diminution in the size of the swelling. Notwithstandingly, Matas entertained some doubts as to its aneurismal character, but thought ligation was indicated and accordingly tied the common carotid in the triangle of election. The swelling was immediately reduced in size. Two years afterwards the mass was still present, but was smaller and did not pulsate.

Ott (Ann. of Surg., 1921, LXXIV, 517 & 522): A woman, aged 26, came to the Mayo Clinic, for consultation, February 14, 1913. Six years previously bleeding from the right ear had commenced. One year later an operation was performed to remove a growth. One year afterwards she experienced severe pain in the head, throbbing, dizziness and bleeding from the ear of more or less severity. Examination revealed a pulsating tumor in front of the right ear and another in the left submaxillary space. The patient could only open her mouth slightly. A diagnosis was made of an aneurism of the right external carotid artery, also aneurism of the left internal carotid extending down to the common carotid. The right external carotid artery and internal jugular vein were ligated on February 20, 1919. Six days later the left common carotid artery was tied just below the bifurcation for an aneurism which apparently involved both the internal and external carotids. The internal and external jugular veins were also ligated. The patient reported two years after the operation the aneurism had shown no signs of recurrence.

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TRAUMATIC RUPTURE OF THE URINARY BLADDER WITH REPORT OF FOUR CONSECUTIVE CASES WITHOUT A FATALITY.

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A survey of the literature demonstrates conclusively that traumatic rupture of the urinary bladder occurs so infrequently that seldom more than one or two cases of this condition are seen in the service of one physician within a reasonable period of time. Consequently, about all the available statistics on this subject are tabulations from the experiences of many surgeons which extends over many years. For this reason the records of a single clinic (no matter how large) are within themselves of little value in the way of compiled statistics. It therefore behooves each of us to record and accurately report all of our cases in the interest of advancement of this particular field of surgery. A failure to do this has in the past been a potent factor in keeping rupture of the bladder in the list of uncommon accidents. The comparative rarity of reported cases stimulates the writer to report this series of four consecutive cases of urinary bladder rupture without a fatality, in spite of hazardous though interesting complications in all but one case.

The case histories are as follows:

Name:—J. P. (No. 601-14), age 25 years, white, male, Nationality—Pole.

Admitted to St. Joseph's Hospital, October 18th, 1914.

Chief Complaint:—Pain in abdomen and back.

Diagnosis:—Rupture of Urinary Bladder, and general peritonitis.

Family and past history not important.

Present Illness:—Five days ago while in a quarrel with a comrade, patient fell twenty steps down a flight of stairs and landed on his abdomen against the floor. He was temporarily dazed and lay motionless for a while, but was later placed in bed and made comfortable. The following morning the patient became decidedly uncomfortable with nausea, vomiting and pain in lower abdomen, for which his physician ordered anodynes and counterirritants. The patient's condition continued thus from Wednesday until the following Sunday when he was taken to the hospital at 4:30 P. M. On examination patient was found to be in a markedly shocked state with pulse weak and rapid, respiration labored and fast, expression, pinched and distorted, lips covered by a decided herpes, tongue thickly coated, breath offensive, mentality blunted and confused. Bowels and bladder quiescent since accident five days ago. Vomiting started again two days ago and has continued to the present time. Small quantities of milk constituted patient's diet since accident.

Abdomen somewhat distended, tympanitic in median line and distinctly flat on both sides and in flanks. Abdominal wall rigid and board-like, tenderness most pronounced over lower part of abdomen. Heart regular, all sounds clear and distinct, pulse weak and fast.

Catheterized specimen, small in amount and contained blood. Leukocyte count 4800, with a 90% polymorphonuclear. General condition of patient was poor. A diagnosis of rupture of the bladder with a general perionitis was made with recommendation for immediate operation.

Operation:—One hour after admission patient was prepared for operation and under ether anesthesia a low midline abdominal incision was made and exploration revealed the abdominal cavity filled with bloody serum and urine. The intestines were red, inflamed and glued together with a dense coating of fibrinous exudate which had a tendency to bleed when manipulated. There were no injuries noted in the intestines. The urinary bladder was next explored and a rent five and a half to six inches in length was found running vertically through the posterior wall and extending from the prevesical space above and in front to the posterior cul-de-sac behind. The opening thus occupied the entire peritoneal surface of the bladder. With the patient in the Trendelenburg position the intestines were gently packed off and two traction sutures were inserted, one in each end of the bladder wound and the rent thus brought up free into the abdominal opening for suture. The bladder wall was much thickened, friable and edematous, but with care a continuous chromic catgut suture through all the coats of the bladder was inserted and a Lembert peritoneal stitch of the same material reinforced the primary suture. A large-size rubber tube and four cigarette gauze drains were carefully placed in the pelvis and the abdominal wound closed in layers. A medium size soft rubber catheter was inserted per urethra and made fast. 1,000 cc. of subcutaneous salt were injected during the operation under both breasts and patient returned to bed in fair condition.

The wound was dressed daily; Murphy's proctoclysis continuous method was given for the first eight days. Abdominal drainage was abundant. The cathether was removed on the fourth day and the patient catheterized every eight hours until he began to void voluntarily, three days later. Drainage ceased in four weeks and the wound was completely healed one week later. During the first week the patient had a stormy convalescence due to septic intestinal paresis and abdominal gaseous distention. But with repeated enemeta this condition was finally overcome. Result—cured.

Name:—H. O. (No. 275-15); age 38 years, white, male.

Admitted to St. Joseph's Hospital May 16th, 1915.

Chief Complaint:—Pain in head, chest, abdomen and hips.

Diagnosis:—Rupture of urinary bladder, fractured base of skull and fractured seventh and eighth ribs on right side.

History of having been run over by a large touring car which happened to be in gear when he started the machine with a crank. Patient was immediately brought to the hospital and on examination he was found to be pale and shocked, pulse weak and respiration labored with an expiratory grunt. No paralysis noted, but there was semi-consciousness; bleeding from right ear; and pupils unequal, but otherwise eyes were normal. Several abrasions were noted on head and face. No vault injury elicited. Chest showed contusions over right side with fracture of seventh and eighth ribs which were immediately immobilized with adhesive plaster.

Abdomen was discolored over pubic area, extending down in the perineum with some tenderness on deep pressure over lower abdomen manifested by patient's movements. There was some little muscle spasm but no dullness noted on percussion. Extremities were negative. Catheterized specimen showed macroscopic blood. A hypodermic of morphine and atrophine was given and patient prepared for operation.

Operation:—A low midline abdominal incision was made down to the peritoneum which was opened through a small incision and abdomen explored. There being no visible evidence of trouble, the peritoneum was closed and the superficial incision continued down over the pubic region exposing a transverse fracture of the pubic arch with two and a half to three inches separation of the fragments. A further examination revealed a two and a half inch wound through the bladder wall immediately under the bone injury, which was slightly to the right of the median line. The perineum was infiltrated with urine and blood clot which was removed with warm salt gauze. A soft rubber urethral catheter was then passed freely into the bladder thus demonstrating no injury to the urethra.

The bladder wound was closed with two rows of No. 2 chromic catgut suture material and the perineum drained separately through a counter opening with a rubber tube and three cigarette gauze drains.

My attention was next called to the fractured and widely separated pelvic arch. With some little difficulty the fragments were approximated and a four screw Lane bone plate was placed across the anterior and upper surfaces of the bone which was quickly and easily applied, and proved to be a most efficient fixing agent. A small tuck of gauze was inserted and the soft structures closed.

For further immobilization only adhesive straps across the pelvis were used. A catheter was made fast in the urethra and the patient returned to his room in fair condition. Ether anesthesia was used. Wound was dressed daily, catheter was removed on the second day, and patient voided voluntarily six days after the injury. All drains were removed in two weeks and the wound promptly healed with bone plate still in place. Result—cured.

Name:—J. J. (No. 267-16); age 12, white, male.

Admitted to St. Joseph's Hospital March 18th, 1916.

Chief Complaint:—Pain in abdomen and right leg.

Diagnosis:—Rupture of urinary bladder, peritonitis and a fracture of the right femur at the middle third.

Past history of no importance.

Patient was accidentally run over by a heavy truck, one of the rear wheels passing over his lower abdomen and right thigh. On admission to the hospital one-half hour after accident, patient was pale and knocked out from traumatic shock, pulse was weak, respiration normal, pupils equal and reacted to light and accommodation. No bleeding from the ears, mouth or nose. General attitude of the patient, more or less quiet and unconcerned as to his condition or surroundings, and was aroused only by manipulation of the limb or pressure on his abdomen. Chest normal.

Abdomen uniformly tender on deep pressure noted by patient's expression and movements, percussion negative. Bruises seen over lower abdomen, right hip, and thigh. Right leg is flaccid, shortened and externally rotated with foot lying flat on the table. Fracture noted at the middle of the femur. Patient vomited while on way to the hospital.

The injury over the lower abdomen led me to suspect a bladder complication and a catheterized specimen showed macroscopic blood. Temporary immobilizing splints were applied to the fracture and the patient prepared for immediate operation.

Operation:—Under ether anesthesia the lower abdomen was opened in midline, contents explored and urinary bladder found to have a two and a half inch long intra-peritoneal rupture. Traction sutures were inserted in each end of the tear and with gentle pull by an assistant the bladder was elevated nicely into view for suturing. A continuous No. 2 chromic catgut suture through all the coats was used to close the bladder wound, and a Lembert peritoneal stitch of the same material was superimposed as a reinforcement. Abdomen drained with medium sized rubber tube and four cigarette drains placed in the bottom of pelvis. Wound was closed in usual manner. A soft rubber catheter was inserted through the urethra and made fast with adhesive. The patient was returned to bed in good condition.

Post Operative Treatment:—Wound dressed daily, continuous Murphy drip given for the first four days. Catheter was removed on second day and patient voided naturally two days later. Drains out and wound completely healed in fifteen days.

An X-ray showed the fragments of the fractured femur in bad position after manipulation and attempt at correction, therefore, the open method of treatment was decided upon.

Three weeks after the abdominal section the patient was again anesthetized and by an external incision the thigh was opened over the site of fracture and a six screw bone plate applied. A large amount of callus had been thrown out around the fragments and this was probably responsible for failure of reduction prior to open method. Wound was closed with a small rubber tissue drain which was removed on the third day. Patient made an uninterrupted recovery, no deformity.

Name:—M. K. (No. 118-18), white, female; age 25 years.

Admitted to St. Joseph's Hospital, February 15th, 1918, complaining of severe abdominal pain and giving history of having stumbled two days ago over a plank in her back yard, which threw her on her abdomen.

There was considerable pain in lower abdomen with constant desire to micturate from the onset. No urine had passed per urethra since the accident and any attempt to void was accompanied by a cramp-like pain and burning in lower abdomen.

Lower abdominal pain, which had gradually become worse, was the outstanding symptom. Physical examination showed a well developed young female, somewhat shocked; pulse, 106; respiration, 32; and temperature 99. Blood pressure, systolic, 110, diastolic, 70. White blood count, 18,000, with 80% polymorphonuclear. Past history was not important. No history of cystitis, habits temperate. Abdomen was distended and tympanitic anteriorly and decidedly dull in both flanks, dullness influenced by position. Entire abdomen was tender and rigid, and the fundus of the bladder could not be made out. No evidence of external injury noted. Both kidneys were palpable and not enlarged. The catheterized specimen one-half ounce in amount, was clear microscopically, but showed red and white blood cells under the microscope. Because of apparent anuria with fluid in abdominal cavity and presence of blood in catheterized specimen, a diagnosis of ruptured bladder was made and the patient immediately prepared for operation.

Operation:—Under ether narcosis the abdomen was opened by a low midline incision, explored and found to contain a large amount of straw-colored uriniferous fluid. The intestines were distended with gas, dull reddish in appearance, with many coils of small intestines glued together by fibrinous exudate into the pelvis. The posterior wall of the bladder showed a vertical tear two inches long which was sutured by two rows of chromic catgut suture material, followed by abdominal drainage in the usual manner. No retention catheter was used in this case. The bladder was catheterized every eight hours for five days, after which time, patient began to void voluntarily. All drains were out in three weeks, and on the thirty-second day patient returned home cured.

It is difficult to say who performed the first successful operation for traumatic rupture of the bladder. It has been claimed that no successful operation had been recorded until Sir William MacCormac reported his two successful cases in 1885. We find, however, that Bartels, seven years before, reported a case of intraperitoneal rupture operated upon by Walter, and was cured. In the same series he noted that 34.2% of the extraperitoneal cases which were operated on had lived.

Probably the first reported recovery after extravasation of urine in the abdominal cavity was the case of Mr. Chaldecott in 1848, and to show the doubt that existed as to the possibility of recovery in those days, one is referred to the controversy between Dr. Eben Watson and Dr. Gillispie on Mr. Chaldecott's case.

There are two important anatomical divisions of rupture of the bladder, namely, intraperitoneal, where the peritoneal investment is likewise involved, and the urine is poured directly into the abdominal cavity.

Second, extra or sub-peritoneal with an extravasation of the urine in the tissues outside the peritoneal cavity. While the peritoneum scarcely covers more than half of the bladder surface, even when distended, the figures of I. R. Castagnol indicate that the intraperitoneal rupture occurs in 85.5% of all cases, as may be judged by the following table:

Rivington	90%
Fenwick	88%
Bartels	79%
Ulmann	85%

Bartels in 1878 reported a series of one hundred and sixty-nine cases of rupture of the bladder and found that 64½% were associated with fracture of the pelvis. Of this number 27½% showed multiple fracture, 20.2% a diastasis of the symphysis pubis, 10% separation of the scaro-iliac joint, 24.7% fracture of the os pubis, 11% fracture of the ischium, 8.2% fracture of the ilium and 4.6% fracture of the sacrum and os pubis.

In this series of collected cases, there were ninety-five operations performed for intraperitoneal rupture with one recovery and seventy-six operations were followed by twenty-six recoveries in the extraperitoneal group of cases.

Sildowitch in 1903 published the records of thirty-two cases of intraperitoneal rupture of the bladder treated by Russian surgeons with the result that fifteen were not operated, and all died, and seventeen were operated with only four recoveries.

An American surgeon, D. Fiske Jones, the same year published far more favorable statistics. He puts the mortality, in published cases, as over 60% before the year of 1892, and under 30% since that time.

Reviewing the literature over a period of one hundred years up to 1916, Quain reported one hundred and twenty-seven cases of extraperitoneal rupture, including one of his own, with a total mortality of 74%.

By further analysis he finds that in eighty-three cases reported before 1890, there was a mortality of 86.7%, and in forty-four cases since that time, he found that 48% died. The records since 1905 show a further improvement in so far as the mortality has been reduced to 38%. Fracture of the pelvis, in some form, was invariably found to be associated with the rent in the bladder, and it is possible that the relatively high mortality here is due to traumatic shock incident to serious crushing injuries, and not the bladder wound which should be classified as secondary.

In this type, a fracture is usually responsible for the rupture, either directly or indirectly, as a spicule puncturing the organ, a crushing injury associated with collapse of the pelvic arch, or as happened in case number 275-15 where the bladder was pulled asunder because of fracture with separation at site of attachment of the anterior inferior surface of the viscus.

Now and then the fracture will have nothing to do with the mechanism of the rupture.

Dambrin and Papin (1904) gave the mortality as 43% in the abdominal cases, and from 1900 to 1907, Lamotte recorded the most favorable prognosis up to that time, with a mortality of 20.5% for the intraperitoneal and 9.5% in the extraperitoneal type. The best obtainable statistics to date indicate that tabulated records vary between 20.5% and 43% mortality in the intraperitoneal and from 9.5% to 30% in the extraperitoneal cases.

Extraperitoneal wounds may occur in most any location in the bladder and may assume any size or shape, depending largely upon the situation of the bone injury. On the contrary, wounds of the intraperitoneal variety will occur on the posterior wall in more than one-half the cases, the wound is usually linear, fairly clean cut, single and vertically situated. The wound is less likely to be multiple than in the extraperitoneal type, and when produced by explosive effect as contre-coup, it may be several inches in length, indeed, case number 601-14 presented a tear vertical in position which extended across the entire peritoneal covered portion of the bladder, a distance of five and one-half inches.

Many theories have been advanced in an effort to explain why rupture most frequently occurs on the posterior aspect of the organ. Houet compares the distended viscus to a solid organ resting upon the superior pelvic strait immediately over the sacral promontory, and a blow over the abdominal wall, a fall on the feet, or ischii will initiate increased intra-vesical tension through compression against the sacrum sufficient to produce a rupture. Samuel Alexander also maintains that the most usual cause of the injury is a crush which forces the distended bladder against the sacral promontory. Practically, these theories are incorrect because the findings at operation and occasionally at autopsy, show that the tear is seldom situated at this bony protrusion. The experiments of Besley, Papin, Dambrin, Lamotte and others have recently contributed much to refute these theories.

Verseri contends that the fasciculi which compose the muscular layers of the bladder offer the minimum thickness and support to the posterior wall and because of this anatomical arrangement, he believes this to be the weakest area.

A blow of any nature must of necessity be over the anterior aspect of the distended organ, and the physical laws of force teach that the impact is transmitted through and around the conductive fluid to a point about opposite the origin of the force in the form of accumulated energy. This latter point invariably corresponds to the area of the bladder that is least protected and supported by its attachments to the pelvic tissues, the posterior wall, which represents the place where more than 50% of the ruptures occur. Cranial surgeons are thoroughly familiar with fracture of the skull by contre-coup, and the same type of injury very often occurs in the bladder.

It is probable that all these, and many more factors play a part in the mechanism of rupture, and the frequency of posterior wall attack occurs chiefly because this is the weak spot for the intraperitoneal variety of traumatic rupture.

Normal urine is free from pathogenic organisms, and for the first eight to twelve hours, has only slight irritative effect outside the urinary tract, but with the onset of chemical changes in the urinary salts, an increased irritation and marked toxic absorption usually begins. In the abdomen where there is an absorbing area equal to the entire skin surface there occurs an overwhelming toxemia, unless the process is walled off. A virulent peritonitis may follow from migration of intestinal bacteria through the already inflamed intestinal wall, or the urine itself may be infected because of pre-existing cystitis or contamination following unskillful and too frequent catheterization. In the extraperitoneal tissues the irritating or infected urine under pressure burrows along the fascial planes, stripping it of all nutrition, and thus converts this tissue into a mass of devitalized, necrotic fascia. A virulent cellulitis soon results unless relieved by early and efficient drainage.

The etiology of rupture may be conveniently divided into predisposing and exciting causes. To this may be added certain so-called spontaneous ruptures following pathological lesions, ulcers, atony, cystitis and prostatic obstructive lesions, such as has been reported by White and Wigram, W. Kohlmann and others.

Intraabdominal pressure initiated by labor, micturition or straining at stool have frequently been the exciting factor. An interesting case has been recently reported by C. B. Keenan, which occurred during labor.

The chief predisposing causes are a distended bladder and acute alcoholism. Traumatic rupture occurs most often in men between the ages of twenty and forty, and the ratio as compared to women, is nine to one. One-third of Bartels cases were intoxicated at time of injury, and one is here presented with interesting correlated etiological factors. Occupational hazard and exposure to greater injury occurs in the male adults who frequently become intoxicated, possess usually a full bladder, and are less able to protect themselves against impending accidents.

The exciting cause is direct or indirect violence which may be so slight under favorable predisposing conditions as to give rise to what is often termed a spontaneous rupture. A careful history will very often elicit the cause, and it would therefore seem fitting to be more explanatory and call these cases idiopathic rupture.

All authorities agree that the onset of toxic or septic symptoms vary largely because of the bacteriological state of the urine. Old cystitis cases early give rise to alarming septic reaction, as is occasionally seen in the so-called spontaneous ruptures of pathologic origin, while a sterile urine may be many days in producing any reaction at all. When one recalls that from 1000 to 2000 cc. of urine is being poured into the abdominal cavity every twenty-four hours, over an absorbing surface equal to the entire skin area of the body, why should there not be evidence of absorption? Nevertheless, a very small percentage of cases are noted in the literature where extravasation of blood and urine in the abdominal cavity is not followed by septic peritonitis. Eckert recalls a case reported by Ledderhose in which an intraperitoneal rupture of the bladder was found in a patient seventeen days after injury, during operation for evacuation of a small extraperitoneal abscess. No signs of peritonitis were discovered.

Only the simple physiologic phenomena of contractility and retractility of blood vessel walls can explain the relatively rare cases of hemorrhage, because as has been pointed out by Farabeuf, the bladder is copiously supplied by blood, there being a rich arterial network in the muscular and subserous coats with large venous plexuses situated on the outer side.

Whether in the abdomen or paravesical connective tissue, the blood forms an excellent culture medium for pathogenic bacteria which may rapidly overwhelm the patient. (I. R. Castagnol.)

Diagnosis:—Of the few cardinal points indicating the diagnosis of a probable rupture of the bladder, the history of an injury is most important, and when carefully analyzed will prove to be of invaluable diagnostic aid. A blow, fall, kick or any other violence over lower abdomen, no matter how apparently insignificant, may produce a serious rupture if the patient has not voided within a reasonable period of time. 'Indirect violence such as falling from some distance and landing on the feet or ischii, and crushing injuries of the pelvis, are frequently associated with urinary bladder rupture.

The same may be said of intraabdominal pressure, as in labor, defecation, micturition, etc., and at times a so-called spontaneous rupture occurs in a pathological bladder. Here the past history of the patient should always be considered, and may aid materially in arriving at a diagnosis.

Since fracture of the pelvis may produce rupture by a spicule of bone being driven into the bladder wall, by separation of the pelvic arch with consequent tearing of the bladder or by collapse of the bony arch and crushing the organ against the promontory of the sacrum, an X-ray examination when possible, may be a valuable diagnostic aid, and frequently locate the type and place of rupture.

Unlike rupture of the solid viscera notably the liver, spleen, pancreas or kidney, there is seldom evidence of alarming hemorrhage, but the patient usually presents the picture of shock, of varying severity, and complains of sudden pain in the lower abdomen.

Frequent, painful, unsatisfactory urination, inability to void, or the passage of only a few drops of bloody urine under little or no pressure, in a previously healthy patient is the usual history, and when connected with an injury, are surely positive signs of urinary tract damage.

If the kidney is the site, one will usually obtain history of trauma immediately over the kidney, there is tenderness, enlargement of kidney area, or mass denoting a hematoma in flank with passage of blood, but seldom any clots. The ureters are rarely severed except in mutilating crushing injuries of the pelvis, and a diagnosis of rupture of the urethra is easily made by tumefaction along the urethra, discoloration in perineum and scrotum, and spontaneous flow of blood from the urethra. Such a case will usually offer obstruction to catheterization. In contusion of the kidney, the initial shock is not so pronounced and rather than become worse, it tends to get better and finally pass off, leaving a slight hematuria for a few days as the only symptom.

Rupture of the stomach is accompanied by epigastric pain, muscle spasm and tenderness, while the pelvis is negative. Explosive vomiting of blood at times in large quantities may be noted. The shock is pronounced.

Intestinal rupture is often difficult to differentiate and is many times missed until symptoms of peritonitis begin. The passage of blood per rectum and a negative genito-urinary tract would point toward the intestinal injury.

Nausea and vomiting may be an initial symptom, but usually comes on later with the symptom complex of peritonitis, or with the beginning of sepsis and cellulitis in the extra or subperitoneal extravasation.

The absence of a wound or injury over the kidney or urethra where blood is present in a small amount or urine obtained by catheterization at a time when the bladder should be full, should in the presence of positive history and other presumptive signs justify exploration..

On the other hand, a large amount of urine will not exclude the possibility of a rupture since one may be either draining the peritoneal cavity, or evacuating an extraperitoneal sac of urine. Indeed if more than 735 cc. in the male and 680 cc. in the female be obtained according to Rauber, one should consider this more significant than no urine at all.

Free fluid may be noted in either flank, or a distinct tumor mass (after catheterization), in the prevesical space. Edema, discoloration and tenderness in the prevesical space, inguinal regions, flanks, perineum or scrotum are diagnostic aids in the subperitoneal type of cases.

Examination of the abdomen shows superficial chest breathing, with immobilization of lower abdomen and muscle spasm, but no rigidity in the early stages. Deep inspiration excites acute cutting or burning pain in bladder, often accompanied by an increased desire to micturate, and a sensation similar to pouring hot fluid in the belly has been experienced.

Shock is most often the outstanding subjective symptom, and may vary from slight syncope to collapse, depending upon the nature of the injury and the associated complications. The picture is seldom that of hemorrhage, and should be easily differentiated in the cases not complicated by this rather rare occurrence. The pulse is rapid, ranging between one hundred and thirty and one hundred and forty with fair volume, and temperature may be but little influenced. If not in a state of collapse the patient is complaining of pelvic discomfort, the principal part of which is referable to the bladder. Abdominal contusion may be confusing, but here again the shock tenderness and muscle spasm very early disappear while the reverse is true in rupture of the bladder.

In the hands of a skilled operator the cystoscope may be of some diagnostic aid in localizing the wound and its situation, particularly if it be small. But one is in many cases handicapped by a cloudy fluid or a collapsed bladder which renders the cystoscope practically useless.

Technique of the injection of sterile gas or fluid into the bladder has been dwelt upon by Alexander, Brown, Keen and others, but because of the added shock, possibility of contamination, or spreading the existing infection, many present day surgeons consider such a procedure ordinarily unwise and unnecessary.

Treatment:—All cases should be operated upon as soon as possible and the operator aims first to close the rent and then institute appropriate drainage.

Recent rupture of a clean bladder will require but little drainage, while late cases and those presenting cystitis will be best treated by generous drainage. Traumatic shock is frequently a factor to deal with and not infrequently will delay surgical interference, while a low percentage of small holes, especially if inaccessibly situated will close spontaneously, provided adequate drainage is inaugurated. This the writer has experienced in two recent cases of gunshot wounds of the base of the bladder.

The Trendelenburg position (moderate) and a fair sized incision with a good light make for exposure and easy closure of the wound.

Spontaneous recoveries are reported, but less than 1% of intraperitoneal rupture will get well without operation, and this allows too small a margin to be worthy of serious consideration. In 1868 Thorp reported a case where the peritoneal sac was washed out with tepid water through the bladder injury, followed by recovery, and nine years later a case was reported by Morris, while more recently Sieur and Bubrijadoux have added another spontaneous recovery.

Cause of Death:—Those cases complicated by fracture of the pelvis die from shock soon after the injury, or following operation, and the mortality in uncomplicated cases is usually produced by peritonitis, cellulitis, abscess or sepsis. Fatal primary hemorrhage is rare, while secondary bleeding in the extraperitoneal type is more frequently seen. In order of frequency shock, infection in its many manifestations, and hemorrhage rank as outstanding factors producing death.

Conclusions.

While traumatic rupture of the urinary bladder may be looked upon as one of the uncommon accidents, it is nevertheless more frequently met with than the literature would seem to indicate, because many of the cases are not reported.

Improvement in technique and earlier surgical aid has reduced the mortality from 60% to less than 30% in the last thirty years.

Shock attending fracture of the pelvis, and other crushing injuries are undoubtedly responsible in a large degree for the present day high mortality in these cases.

More than 88% of bladder rupture occurs in men.

Only one of this series of cases was associated with fracture of the pelvis, yet, statistics show that two-thirds of all cases are complicated by this injury.

Of the intraperitoneal ruptures, explosive effect by contre-coup must be considered an important etiological factor in many cases.

Suturing the rent with abdominal or previvesical drainage is the treatment of choice, yet small wounds of the bladder will readily heal, provided proper drainage is carried out.

Spontaneous recoveries are reported in from one-half to one per cent. of cases.

Intraperitoneal rupture occurs five times as often as the extraperitoneal type.

Notwithstanding the fact that the bladder is richly supplied by blood vessels, it is rare to find hemorrhage in an alarming degree.

The literature clearly shows that many of these cases come to the hospital late, because of a failure in diagnosis, or late medical advice sought by the patient.

A history indicating a pre-existing distended bladder is obtainable in most cases.

In case of doubt about bladder rupture, it oftimes proves better to explore than to wait for evidences of urinary extravasation, or peritonitis.

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EDITORIAL.

BURT J. ASPER.

Efforts are being made to provide a suitable memorial to the memory of Burt J. Asper, medallist, class of 1911, lost with the Cyclops. If the sum realized is sufficient, a scholarship will be established, otherwise the interest from the money collected will be devoted to the purchase of new books and journals for the library. In the latter event an appropriate book-plate will be made and a copy placed in those books purchased from the fund. These have contributed:

Dr. Adolph Mulstein, class of 1911, 4 Willett St., N. Y., N. Y.	**$15.00**
Dr. C. A. Waters, class of 1911, 1100 N. Charles St., Balto.	**10.00**
Anonymous	**10.00**
Dr. Paul P. McCain, class of 1911, Sanatorium, N. C.	**10.00**
Dr. E. J. Nichols, class of 1911, Pikesville, Md.	**5.00**
Dr. Vernon Oler, class of 1911, Billings, Montana	**5.00**
Dr. Charles R. Law, class of 1911, Berlin, Md.	**5.00**

This is a belated effort to do justice to the memory of a fellow alumnus who was an honor and a credit to the University of Maryland. He gave his all, a life full of prospects of infinite success. Let's make the memorial worthy of the man. Remittances may be made to Nathan Winslow, University Hospital, Baltimore. Whatever amount you give will be turned over to the Endowment Committee, thus insuring its proper administration. The following letter is self-explanatory:

June 29, 1922.

Dear Dr. Winslow:

Your letter of June 26, containing checks and cash amounting to sixty dollars has been received. I have opened an account in the Central Savings Bank, with the above, in the name of Dr. Burt J. Asper, Memorial Fund, of the University of Md. Endowment Fund.

Very sincerely,

B. Merrill Hopkinson,

Treasurer.

JOIN UP NOW.

It is the desire to make the Medical Alumni Association a distinctive, a strong factor in the influence for growth, efficiency and sincere help, in the affairs of the Department of Medicine in the University of Maryland.

With a strong dominant Medical Alumni Association. the greatest amount of aid can be rendered to the whole University so that its great importance to the entire country can be demonstrated.

The graduates of each department of the University, building a paramount association, their combined activities, united by a general executive committee can create an authority for good, of a tremendous value.

The history and achievements of the University and its combined schools, The Baltimore Medical and College of Physicians is one of which every graduate should be proud; and he should feel that it is an honor and duty to help in every way for a bigger and better University.

This is the time to join in the forward movements of this University, its past lives for itself worthily respected, but its future is in the hands of the Alumni.

There is evidently some reason why this school of medicine has not drawn to it large endowments, from individuals or educational funds.

The governing body, is struggling to make it worthy of greater confidence in every way.

Its roster is full to overflowing, its graduates are successful yet there is a "something" which needs attention, the University wants your moral help and moral support.

Let every graduate therefore feel a personal interest, let its six thousand speak for the good, let your voice be for progress.

If you feel that it is not conducted as it should be. make helpful suggestions.

Join this association and thereby create a body whose sole interest is the University.

Send one dollar to Dr. Herbert Blake, Treasurer, for membership and be a factor in this great work.

A letter from the President of the Alumni Association.

Dear Fellow Alumnus:

While we may not personally be known each to the other, yet there is the relationship of the same educational mother that we enjoy; so that we are tied together by the ties of inheritance. The same mother gave to us the ways and means of earning a livelihood, gave to us the right to stand out in our community as trained physicians.

It is of interest to recall the origin and age of our University. In 1799 there was started, under an act of the Legislature, a state medical society known as the Medical and Chirurgical Faculty of Maryland. Some of its members, especially might be mentioned Drs. Crawford, Davidge, Cocke, Shaw, soon saw the need of a medical school, resulting in Dr. John Shaw, then of Annapolis, drawing a bill creating the College of Medicine of Maryland, which by enactment of the Legislature became effective December 18, 1807.

This bill made the President of the Medical and Chirurgical Faculty the Chancellor of the College, and reports were to be made biannually to the Faculty. In 1812 the first building to house the school was begun, modeled after the Pantheon at Rome, and still stands in its splendid proportions, doing duty as the Administration Building.

In 1832 Washington College was incorporated, reorganized in 1867, and ten years later amalgamated with the College of Physicians and Surgeons, which in 1915 merged with the University of Maryland.

In 1881 was founded the Baltimore Medical College, succeeding with amazing rapidity, and merged with the University of Maryland in 1913, as a course of progress and strength.

Following the union of these three schools into one compact whole, which was in line with higher medical education, made for a strong university. It was then felt, a university under the aegis of the State of Maryland combining various departments of a university, such as arts, law, medicine, dentistry, pharmacy, etc., under state supervision, was desirable.

The General Assembly of Maryland, by adoption of a new charter created the (new) University of Maryland in 1920. By this act each alumnus of the three schools became an alumnus of the University of Maryland as now constituted.

Today there are approximately 6,000 medical alumni of this new University, each entitled to all the rights and privileges of its membership, not one enjoys any prestige more than the others.

Enjoying the same rights carries with it the essential obligations, duties, and loyalty to it.

In this transition there are certain to result possible rough points in management and teaching, all of which are gradually being eliminated. In the course of a few years, with the State of Maryland its sponsor, coordinating and adjusting its whole public school system, there is evolving a system in this progressive state, with this University as the climax, equal to those of the great West.

The Alumni Association of the Medical Department, sent letters to all of the graduates; many have already responded, but not all.

To make your University the success that it deserves, we must have every one join and become interested in its upbuilding. The voice of the alumni must be unanimous, its tones should be so loud, that it can be heard throughout the land.

The graduates now leaving the school are thoroughly prepared, practically all pass the State Boards; and are occupying positions of trust and honor. Their writings and research work are daily seen, but they are a modest bunch, and do not always give credit to their school.

I wish it were so I could talk directly to you, but the old alumni association is a thing of the past. Help the men who are striving to make this one a success, and let me hear directly from you. Write and send in your application to Blake: let us make for a 5,000 membership. A thousand have sent in their subscriptions. Have you?

G. Milton Linthicum, M. D.

ITEMS.

Dr. W. Houston Toulson has located at 214 W. Monument Street, Baltimore. He will limit his practice to the diseases of the genito-urinary tract.

Dr. Andrew C. Gillis has announced the removal of his office to 1033 North Charles St., Baltimore. He limits his practice to nervous and mental diseases.

Dr. J. Standing Norman, class of 1909, writes that he has removed to Kings Mountain, N. C. He will limit his practice to pediatrics and roentgenology. He was formerly located at Lumberton, N. C., where he was pediatrician and roentgenologist to the Lumberton Hospital. Kings Mountain is in the beautiful Piedmont section and a delightful place to live in. Dr. Norman intends to do some post-graduate work either in Baltimore or New York, this fall. Make it Baltimore, we are glad to have you with us.

Dr. Eustathius Chancellor, class of 1877, assistant resident physician University Hospital, 1877-1878, and assistant to Dr. Francis T. Miles, 1878-1879, who has been in active practice in St. Louis, Mo., for more than 40 years, is rapidly recovering from a "stroke." He will remove to the vicinity of San Diego, Cal., in the fall.

Dr. R. W. Johnson has resigned as superintendent of the South Baltimore General Hospital. He will be succeeded by Dr. W. B. Dalton, formerly a resident physician at the Maryland General Hospital.

The Baltimore Chapter of the Daughters of the American Revolution have presented to the University Hospital $1,000.00, to be devoted to the maintenance of a bed in the maternity.

Dr. H. C. Irwin has located in Pocatello, Idaho. He has his offices in the Carlson Building and limits his practice to surgery.

Dr. Theodore W. Schaefer, class of 1880, of Kansas City, Mo., has an article in American Medicine, 1921, n. s., XVI, 605, entitled

"The Application of the Binet-Simon Tests for Intelligence to Patients by the General Practitioner."

The friends of Dr. Kivy Pearlstine, of Charleston, S. C., will be glad to hear that he has resumed his practice after a period of inactivity of three months spent in a hospital with a broken back, due to an explosion on a gasoline launch. The accident occurred in July, 1921, while Dr. Pearlstine was on his way to see a patient on a British vessel lying in Charleston harbor.

Dr. John R. Abercrombie has removed his offices and residence to 3524 York Road, Guilford, Baltimore.

Doctor Charles Halliday, P. & S., class of 1904, of the United States Public Health Service has been awarded the decoration "Krzys Walecznych," by Poland for services rendered that country while attached to the American Red Cross in 1919 and 1920. The presentation was made by Major K. Mack, military attaché of the Polish legation to the United States. This is the second decoration received by Dr. Halliday from the Government of Poland, the first having been awarded for services rendered by him to the Polish Army in France during the late war.

Dr. William Hollister requests us to announce the formation of a student volunteer band at the Medical School.

Dr. George A. Straus has removed his office to the Walbert, 1800 N. Charles St., Baltimore, Md. His practice is limited to gynecology.

Dr. N. H. D. Cox has announced the removal of his city office to 714 Park Avenue.

Drs. J. W. Pierson and C. A. Waters, 723 St. Paul Street, Baltimore, have installed at the above address the new type high voltage X-ray treatment machine for deep X-ray therapy.

Dr. Frank Marino has opened offices at 1300 St. Paul Street, Baltimore. His practice is limited to general surgery and consultation.

Dr. Charles S. Levy has opened offices at 913 N. Charles Street, Baltimore. His practice is limited to urology and urological surgery in men and women.

Dr. Gilbert T. Smith, class of 1897, for the past twenty years connected with prominent State hospitals; formerly assistant superintendent of the South Dakota Hospital for Insane, Yankton, S. D.; recently assistant superintendent Mansfield State Training School and Hospital, Mansfield Depot, Connecticut, was appointed in April, 1922, Chief Surgeon S/S "Mount Carroll," United American Lines, Inc., 39 Broadway, New York, N. Y. When last heard from he was in Hamburg, Germany.

A son, William Lee Hart, Junior, was born to Major William Lee Hart, Medical Corps, U. S. Army, class of 1906, and Mrs. Hart, at Fort Sam Houston, San Antonio, Tex., April 4, 1922.

DEATHS.

Dr. James Merritt Corkran, class of 1887, of Centreville, Md., died August 11, 1922, at the University Hospital, Baltimore, Md., after an operation for carcinoma of the rectum, aged 62.

Dr. Archibald A. Campbell, of Statesville, N. C., class of 1889, died suddenly from heart disease, July 17, 1922, aged 66.

Dr. William P. Horton, Northwilkesboro, N. C., B. M. C., class of 1892, died May 6, 1922, aged 55.

Dr. Zachary Duvall Ridout, St. Margarets, Maryland, class of 1869, died May 8, 1922.

Dr. Abraham Given Shortle, Albuquerque, N. M., B. M. C., class of 1896, died May 26, 1922, aged 41, from septicemia.

Dr. Thomas A. Matthews, class of 1890, of Castalia, N. C., died April 29, 1922, aged 54, following a long illness.

Dr. Theron Earl Roe, Tigerville, S. C., P. & S., class of 1910, died May 11, 1922, aged 34, from cerebral hemorrhage.

Dr. Joseph B. Waples, Georgetown, Del., class of 1868, died May 19, 1922, aged 75, from cerebral hemorrhage.

Dr. John Woodson Caines, Cuyahoga Falls, Ohio, B. M. C., class of 1905, a lieutenant in the Medical Corps, during the World War, died June 5, 1922, aged 42.

Dr. Nelson Stiles, Medford, Okla., P. & S., class of 1882, died March 21, 1922, aged 65, from heart disease.

Dr. Russell Clifford Edwards, Newark, Ohio, P. & S., class of 1892, died April 13, 1922, aged 59.

Dr. Clarence Warfield, Baltimore, B. M. C., class of 1891, died May 10, 1922, aged 56, from tuberculosis.

Dr. Winton M. Nihiser, Hagerstown, Maryland, P. & S., class of 1882, Bellevue Hospital Medical College, New York, class of 1885, died June 17, 1922, from a bullet wound of the head, aged 63.

Dr. John C. Wise, Washington, D. C., Medical Director, U. S. Navy, Washington University School of Medicine, class of 1869, died June 13, 1922, aged 73. He entered the Navy as assistant surgeon, April 28, 1870, and retired October 7, 1910; was fleet surgeon on the Baltimore of the Asiatic Squadron from 1897 to 1899, participating in the Battle of Manila Bay.

Dr. William C. McCurdy, Philadelphia, P. & S., class of 1874, died May 20, 1922, aged 66.

Dr. D. J. Reinhart, Baltimore, Maryland, class of 1871, died August 14, 1922, aged 77.

Dr. George W. Barkman, Govans, Maryland, P. & S., class of 1881, died July 12, 1922, aged 71.

Dr. George M. Bell, Wakefield, N. C., P. & S., class of 1880, died May 18, 1922, aged 66.

Dr. Lawrence Whiteford Nettles, Camden, S. C., P. & S., class of 1885, died June 26, 1922, aged 69.

Dr. Christopher C. Hersman, Pittsburgh, Pa., P. & S., class of 1884, formerly lecturer on mental and nervous diseases at the University of Pittsburgh, died April 30, 1922, aged 68.

Dr. Ambrose Augustine Keeley, Fall River, Mass., P. & S., class of 1905, died April 5, 1922, aged 51, from dilatation of the heart.

Dr. Charles H. Barron, Rocky Mount, N. C., class of 1868, died March 17, 1922, aged 82.

Dr. Eugene Rogers Albaugh, Glenville, Pa., P. & S., 1875, died April 22, 1922, aged 67, from chronic nephritis.

Dr. Edward Steptoe King, Sharpesburg, N. C., class of 1889, died April 11, 1922, aged 59, from cerebral hemorrhage.

Dr. Charles Albert, Rockville, Md., class of 1872, died July 23, 1922, aged 69, from heart disease.

Dr. Milton C. Hunter, Champion, Pa., P. & S., 1882, died August 4, 1922, aged 72, from pneumonia.

Dr. Preston B. Loftin, Beauford, N. C., class of 1888, died recently, aged 60, from carcinoma of the stomach.

Dr. Philip Adolphus, Chicago, class of 1858, one of our oldest and most distinguished alumni, emeritus professor of clinical gynecology at Rush Medical College, Chicago, Civil War veteran, for 33 years superintendent of the Central Free Dispensary, consulting physician to the Presbyterian Hospital, died August 26, 1922, aged 94, from broncho-pneumonia.

Dr. James M. White, Covina, California, class of 1879, died July 12, 1922, aged 64, from paresis.

Dr. Joseph William Kelley, Newark, N. J., P. & S., class of 1897, a captain in the medical corps of the U. S. A., during the War, died August 20, 1922, aged 48.

Dr. Robert P. Morehead, Weldon, N. C., P. & S., class of 1895, died August 15, 1922, aged 52.

Dr. Levi Allen Neiman, Brooklyn, N. Y., B. M. C., class of 1897, died August 25, 1922, aged 60, from streptococcic septicemia and endocarditis.

BOOK REVIEWS.

The Practice of Medicine. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania: Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Octavo of 1106 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $7.50 net.

Most text-books are poorly balanced. They are either too fulsome or too skimpy for student and general practitioner's uses. Stevens has struck a happy medium giving sufficient weight to the important and less important subjects alike. During recent years many problems have beset the profession, some of which have been definitely solved whilst others yet remain to reveal their secrets. Moot points to a large extent have been avoided and only material of use to the intelligent practice of internal medicine incorporated. Those looking for an excellent survey of the present status of present day medicine treated from the viewpoint of one engaged in the alleviation of sickness will find their wish gratified by this book. It encompasses the infectious diseases, intoxications, food deficiency diseases, disorders of metabolism, diseases of the digestive tract, of the respiratory and circulatory systems, of the kidneys, independent diseases of the blood-forming organs and the anemias, the hemorrhagic diastheses, maladies of the spleen, ductless glands, joints and bones, disturbances of the nervous system, etc: It is a sane, every-day book for every-day doctors, thoroughly reliable, dependable and usable.

Applied Chemistry. By F. N. Peters, Ph. D., Instructor in Chemistry in Central High School, Kansas City, Mo., for twenty-three years; more recently vice-principal. Illustrated. St. Louis: C. V. Mosby Company, 1922. Cloth, $3.50 net.

In this book Peters presents the chemical facts of every day life in a most interesting and entertaining and instructive manner. It presents in a simple form the basic laws of chemistry making them readily graspable to those desirous of getting an insight into the principles of chemistry. As an initiation into the insight into chemical reactions it will be found thoroughly trustworthy and dependable. It gives us much pleasure to recommend it to the good graces of those beginning the study of this most important subject.

Principles and Practice of X-Ray Technic for Diagnosis. By John A. Metzger, M. D., Roentgenologist to the School for Graduates of Medicine, Medical Department, University of California, Southern Division, Los Angeles. With 61 Illustrations. St. Louis: C. V. Mosby Company, 1922. Cloth, $2.75 net.

Beginners and workers in the X-ray will find this little manual of much value in enabling them to master the technic of position and exposure. The illustrations are most instructive. Beginners will find it of material assistance in improving the quality of their work.

Practical Infant Feeding. By Lewis Webb Hill, M. D., Junior Assistant Physician to the Children's Hospital, Boston; Assistant in Pediatrics, Harvard Medical School. Octavo of 483 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $5.00 net.

This book concerns itself with the modern ideas on infant feeding. The complicated measures of the yesterday have given way to simpler and more practical methods which any practitioner can carry out in his daily rounds. In a few words the object of this book is to make toward a more intelligent feeding of infants. This the author hopes to accomplish by inculcating in those feeding infants a knowledge of the chemistry of metabolism in the normal and abnormal baby; in brief to supply a satisfactory working knowledge. It is a clear concise presentation of the subject, by one who has had a wide experience in the feeding of the babe, set forth in simple language, containing many valuable suggestions. It is with much pleasure that we commend it to our readers as a thoroughly reliable guide.

Tuberculosis in Childhood and Infancy. Lectures delivered at the Children's Hospital, Philadelphia, under the auspices of the Pediatric Society. By J. Claxton Gittings, M. D., Professor of Pediatrics in the Graduate School of Medicine, University of Pennsylvania; Visiting Physician at the Children's Hospital, Philadelphia; Assistant Pediatrist at the University Hospital, and Frank Crozer Knowles, M. D., Professor of Dermatology in the Jefferson Medical College; Clinical Professor of Dermatology in the Women's College; Dermatologist to the Presbyterian and Children's Hospital; Chief of the Skin Dispensary in the Pennsylvania Hospital and Astley P. C. Ashhurst, M. D., Associate Professor of Surgery, School of Medicine, University of Pennsylvania. With 23 Illustrations. Philadelphia and London: J. B. Lippincott Company, 1922. Cloth, $5.00 net.

Though childhood is especially susceptible to the ravages of the tubercle microbe, no one book has been devoted especially to this side of pediatrics, therefore this book should be most welcome to those engaged in the management of children. It considers the types of tubercle bacilli and their relative importance, childhood infection and immunity, methods of dissemination and modes of infection. A chapter is devoted to the general principles of diagnosis of tuberculosis, from the carefully elicited history to the complete examination, including also constitutional symptoms which are more or less common to all forms of the disease. It gives detailed instructions for the application of the various tuberculin tests. Tuberculosis of the cervical lymph nodes, of the upper respiratory tract, of the bronchial nodes, pleura and heart, of the skin, of the abdominal cavity and the genito-urinary tract, of the bones and joints and of disseminated tuberculosis are thoroughly discussed from the standpoint of the practitioner. It is replete with many helpful points in symptomatology, differential diagnosis and treatment, as they concern the special systems involved as well as from the point of view of the management of the tuberculous child. The book is eminently practical and contains all that is worthwhile in the mangement and diagnosis of tuberculosis in the young.

Diseases of the Skin. By Henry H. Hazen, A. B., M. D., Professor of Dermatology in the Medical Department of Georgetown University; Professor of Dermatology in the Medical Department of Howard University; Sometime Assistant in Dermatology in the Johns Hopkins University. Second Edition. 241 Illustrations, including two plates in Color. St. Louis: C. V. Mosby Company, 1922. Cloth, $7.50 net.

The student and general practitioner will find the present edition of Hazen's "Diseases of the Skin," the same useful and helpful book as its immediate predecessor. It is a thoroughly practical book which goes into the subject of skin lesions in sufficient detail for those engaged in the practice of medicine or those desirous of obtaining a working knowledge of the subject. A particularly attractive feature of this edition is the large number of well executed illustrations. Amongst the diseases treated in this edition but not mentioned in the first are: Disturbances due to the Vegetative Nervous System; Naevus Anemicus and the retention cyst of the lip. It gives us much pleasure to recommend the book to our readers as a thoroughly reliable, modern, and dependable treatise.

Clinics of George W. Crile, M. D., and Associates at the Cleveland Clinic, Ohio. The Thyroid Gland. Octavo of 228 pages, with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $5.00 net.

Crile and his associates have had such a vast experience in thyroid maladies that whatever they have to say is of the utmost value to the surgeons and physicians of this as well as other countries. The present volume represents only today's viewpoint of these writers. They realize that our knowledge of the thyroid is still in a period of flood and ebb and must of necessity undergo changes in the future. In the present volume these points are stressed:

(1) Endemic goiter is a geologic deficiency due to lack of iodin in the organism.

(2) By the proper administration of iodine to the pregnant mother, and to the child up to and through the period of adolescence, endemic goiter may be prevented; that is to say, the children of goitrous regions may be as goiter free as are the children of the seashore.

(3) After the twenty-fifth year of age iodin exerts little or no beneficial effect on goiters.

(4) By the improper use of iodine or thyroids products many cases of quiescent goiter, especially of the adenomatous type, are converted into exophthalmic goiter or hyperthyroidism.

(5) Induced hyperthyroidism is essentially identical with spontaneous hyperthyroidism.

(6) About 30% of all malignant tumors of the thyroid arise in the fetal adenomata, hence cancer of the thyroid, in the offspring.

(7) Colloid goiters, colloid adenomata, and adenomata in patients with normal sensitization and normal metabolism may be considered as simple or quiescent goiters.

(8) Hyperthyroidism may be associated with a colloid goiter (rare), colloid adenoma, or hyperplasia. Hyperthyroidism presents no uniformly specific pathology of the thyroid gland.

(9) With certain exceptions the increased sensitization of the organism due to hyperthyroidism is manifested by abnormal nervousness, tachycardia, tremors, increased basal metabolism, and loss in weight.

(10) With certain exceptions increased sensitization due to hyperthyroidism is specifically exaggerated by the injection of adrenalin (Goetsch test).

(11) Basal metabolism estimation provides a valuable, but not a specific test for the presence of hyperthyroidism. Basal metabolism estimations are of value in the differential diagnosis of borderline cases, but are of little value in the determination of the operability or prognosis of cases of hyperthyroidism.

(12) In a small group of cases goiter may cause myocarditis and hypertension without involving the nervous system.

(13) That the body is an electrochemical mechanism in which the electric conductivity, hence oxidation, is controlled by the thyroid.

(14) That the electric conductivity of certain active tissues and organs is increased by iodine. Therefore in all cases of hyperthyroidism or hyperiodism the same tissues would not be equally influenced, but in some cases one and in others another tissue would show the greater alteration, thus producing such various types of disease as the exophthalmic type, "toxic adenoma," the myocardial and the cardio-vascular types. Graves' disease, Gull's disease, Basedow's disease, exophthalmic goiter, toxic adenoma are, at best, loose and unsatisfactory terms.

(15) That hyperthyroidism is an intracellular acidosis which is overcome by restoring the normal acid-alkali balance. This is accomplished by the subcutaneous infusion of from 3000 to 5000 cc. of water; by digitalizing the heart; by blood transfusion, and by rest.

(16) Any case up to the beginning of dissolution is operable, or may be made operable by a short period of active treatment.

(17) Preliminary ligations are made in about 40% of the cases.

(18) The average reaction following ligation is practically the same as the reaction which follows admission to the hospital.

(19) Hot-water injections, quinine and urea injections, X-ray or radium are no longer used; instead is substituted a planned

regimen of rest and diet just as if no operation had been performed.

(20) In view of the surgical results surgical treatment is advised for all cases without regard to the degree of hyperthyroidism.

Among the contributor to the volume are Graham on the "Diseases and Pathology of the Thyroid Gland"; Phillips, "Cardiac Disturbances Associated with Disease of the Thyroid Gland"; Waugh, "The Relation Between Diseases of the Thyroid Gland and Laryngeal Function"; Dinsmore, "Adrenalin Sensitization Test for Hyperthyroidism"; Nichols, "The Role Played by the Radiologist in the Diagnosis of Goiter"; Christie, "The Value of Basal Metabolism Studies in Exophthalmic Goiter"; Crile, "Surgery vs. X-ray in the Treatment of Hyperthyroidism"; Crile and Lower, "The Technic of Operations on the Thyroid Gland"; and Gibson, "The Postoperative Treatment of the Exophthalmic Goiter Patient.

Naturally the book is a very valuable contribution as are all from the Cleveland Clinic and should prove most useful to those engaged in the management of thyroid patients.

The Writing of Medical Papers. By Maud H. Mellish, Editor of the Mayo Clinic Publications. 12 mo. of 157 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $1.50 net.

This little book fills a long felt need in the medical literature. Every page is full of helpful suggestions to those engaging in the writing of medical papers. It will be found especially useful to those who have not mastered the art of good composition. It emphasizes what is and what is not good English, what is accepted as good form and what as poor. Going directly as it does to the heart of the subject, it should prove of infinite service in making for better constructed and expressed medical papers.

Symptoms of Visceral Disease. A Study of the Vegetative Nervous System in its Relationship to Clinical Medicine. By Francis M. Pottenger, A. M., M. D., LL. D., F. A. C. P., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Author of Clinical Tuberculosis, Tuberculin in Diagnosis and Treatment, Muscle Spasm and Degeneration, etc. Second Edition. With 86 Text Illustrations and 10 Color Plates. St. Louis: C. V. Mosby Company, 1922. Cloth, $5.50 net.

This monograph interprets in terms of visceral neurology, symptoms which are found in the daily clinical observation of visceral disease. It shows how pathologic lesions in one organ affects other organs and the body as a whole, through the medium of the visceral nerves. Unlike most books of this sort which engage in the discussion of disease processes from perverted anatomical relationships, this is a study in disturbed physiological processes. As such it leads into a study of the problem concerning the sympathetic nervous system. Throughout the book Pottenger endeavors to impress upon the reader the importance of learning to interpret symptoms correctly, to study the patient and not to make of him a walking laboratory. He states correctly medicine can only be advanced by the observation of the patient and not placing entire dependence upon the laboratory findings. He states during recent years the laboratory has attained too great an ascendency over the clinical side of medicine and emphasises the laboratory report is just as liable to be incorrect as the deductions derived from a careful study of the case, citing in substantiation thereof concrete examples. If the book does no more than influence its readers to return to the patient as the basis of their investigations it has served a most useful purpose.

Surgical and Mechanical Treatment of Peripheral Nerves. By Byron Stookey, M. D., Associate in Neurology, Columbia University; Assistant Professor of Neurology, New York Post-Graduate Medical School and Hospital. With a chapter on Nerve Degeneration and Regeneration by G. Carl Huber, M. D., Professor of Anatomy, University of Michigan. Octavo volume of 475 pages with 217 illustrations, 8 in colors and 20 charts. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $10.00 net.

With the oncoming of the Great War nerve surgery received a great impetus and was greatly advanced by the observations of those engaged in this phase of War surgery. Many old notions were found wanting and dispensed with, until at last some sort of order has evolved out of what was formerly a mass of unproven theories. This book is devoted to the expostulation of the principles and methods which have been found of value. The anatomy, embryology and physiology of the peripheral nervous system have all been called upon liberally by the author to elucidate the principles underlying an intelligent treatment of the peripheral nerve lesions. Considerable attention has been given also to the fallacies of certain practices in nerve surgery with an idea of indicating their futility and to hasten their discardment. The author emphasizes especially our present knowledge of the surgical and mechanical treatment of peripheral nerve lesions. Those interested in the present state of development and of the management of peripheral nerve lesions will find in this book a most conservative exposition of the subject as it is known at the present time.

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REORGANIZATION OF THE UNIVERSITY HOSPITAL.

By A. F. Woods,

President of the University of Maryland.

No medical college can do satisfactory teaching without the aid of a modern and well equipped hospital conducted for the specific purpose of the educational work. The University Hospital has long served this purpose for the Medical School of the University of Maryland.

The need for greater hospital facilities is pressing and as already pointed out by Gordon Wilson in the Bulletin, Vol. V, No. 3, October, 1920, an effort has been made to raise the funds necessary for this purpose. Only enough was secured to build a part of the Nurses' Home. This is now completed and constitutes the first unit of the new plant. It is fireproof and modern in every respect. The Training School for Nurses bears a close relation to the Hospital. The lack of modern facilities adds greatly to the difficulties, as well as to the cost of maintaining the Hospital.

There is urgent need for an adequate fireproof hospital, with laboratories and out-patient departments. General plans for these are under consideration and it is hoped that the State may provide for them in the near future.

The general plan and policies to be followed in the reorganization under the Consolidation Act was presented in the Bulletin in articles prepared at my request by Gordon Wilson, Vol. V, No. 4, December, 1920, and in a brief article I wrote for the same number. The larger features of the reorganization were, of course, accomplished by the terms of the Act itself. This provided that all property rights and control should pass to the State of Maryland and that the Board of Trustees of the Maryland State College should become the Board of Regents of the University of Maryland, with all the powers granted by both charters.

When this Act was passed the Board of Trustees, now the Board of Regents, had already adopted a comprehensive plan of development for the Maryland State College, which included an Agricultural group, an Arts and Science group, an Engineering group, an Education group, and a Home Economics group, each with its appropriate departments and curriculum leading to appropriate degrees. The general building plan had been adopted and appropriations requested and in part granted by the previous Legislature and in part included in the Budget Bill for the first biennium following the consolidation. For the first two years, therefore, that is, up to October 1, 1922, only the orginal appropriations granted to the old University have been available for the Baltimore Schools. These were sufficient to keep the Medical School in Class A and provided nothing for the Hospital, except part pay for State patients, $22,500, which amount fell short of paying the cost of these patients by over $35,000 a year. Nothing was provided for Dentistry, Pharmacy or Law.

An effort was made to secure outside aid from sources that we had good reason to believe would help, at least in the Medical group, but this came to nothing. A general appeal to the public was out of the question, owing to the general financial conditions and the numerous drives that had exhausted the supplies available from such sources. It became necessary, therefore, to operate the institution on the small appropriation available from the State and the usual fees and the donations received through the Women's Auxiliary.

A careful audit of the books showed that the Medical School and Hospital had large cash deficits amounting to about $40,000 each, due, in the case of the Medical School, largely to the purchase of real estate needed by the University, and in the case of the Hospital, to the excess in cost of State patients over the amount appropriated. In both cases, also, the cost of maintenance was and still is excessive owing to inadequate equipment. The cost of nursing has been especially high, due to the fact that student nurses were unwilling to accept the living conditions which were so unsatisfactory that we could not wait for the completion of the new Nurses' Home, but had to better them from hospital receipts. Nurses had to be hired to make up the lack of student nurses and the compensation to student nurses had to be largely increased. Some urgent repairs and new equipment had to be provided or close the Hospital. The money for these things has been secured only through the strictest business management and I fear in at least some cases economies that could not be considered good business management.

I know that in doing this we have made some mistakes, but these are inevitable in such a process. All have done the best they could under the circumstances. Much that is still urgently needed cannot be undertaken because of lack of funds. An effort was made at the last session of the Legislature to secure additional appropriations to meet these most urgent needs of the University. The recommendations of the Governor in his Budget were cut by the Ways and Means, and Finance Committees, but nevertheless substantial progress has been made, in that the Senators and Representatives generally have a better knowledge of and, therefore, greater interest in the work the University is doing.

Owing to plans that had been formulated and approved before the consolidation certain buildings at College Park had to be provided. In addition to these, provision was made for the installation of a refrigerating plant in the University Hospital and for the equipment of the new Nurses' Home, as well as for some equipment for Dentistry, and Pharmacy. The latter will be used in fitting up the old church adjoining the Dental and Pharmacy laboratories on the north, which makes it possible to accommodate about fifty additional students in Dentistry.

Of the items allowed in the maintenance budgets the General University appropriation will take care of items amounting to $35,000 a year for the Hospital, Medical School, Dentistry and Pharmacy. With this aid it is hoped to clear up the $40,000 deficit in the Hospital during the biennium and reduce the deficit in the Medical School and also provide for certain necessary Arts and Science subjects in Dentistry and Pharmacy.

Two years from now we hope that all urgent needs of the University will be provided for by the State. There is little doubt that this will be done if the people of the State and the members of the Legislature come to know what the University is doing and can do for them in rendering service urgently needed and not otherwise obtainable. The co-operation of all friends of the University to this end is essential.

So far as funds available will permit, the general plan of reorganization outlined briefly in the Bulletin, Vol. V, No. 4, December, 1920, is being carried out. It may be of interest to quote from the statements there made:

"Standard pre-medical courses and courses in arts and science are available in the Arts and Science Schools at College Park for those desiring to prepare for the Medical College. Scientific specialists in the College Park laboratories and departments are available for special work in the laboratories in Baltimore. Most of the work of the pre-clinical years is available on both campuses. The laboratories will be developed, equipped and manned for thorough teaching and research, with a corps of the best full-time men available and such part-time men as are needed for efficient work. The aim in all departments is to bring in the best men from the best universities to get the inspiration and larger university viewpoint that comes from such association, and to avoid the ill-effects of too much 'inbreeding.'

"The clinical departments also will be headed eventually by the best men available on at least a 'part-time' basis. This should make the places attractive to the very best type of men. Such additional part and full-time men as are necessary to accomplish the best work will make up the staff of each department.

"Fitness for the work will be the only consideration that will weigh in these appointments, which will be made by the President after conference with the deans and heads of departments.

"A short time prior to the United States becoming a participant in the World War the Faculty of Physic of the University of Maryland unanimously recommended that the department of internal medicine be reorganized and placed under the charge of a well-paid, properly trained internist, who should devote four hours every day to teaching and hospital work. They further recommended that the sub-departments of internal medicine should be under the charge of the professor of medicine, and that he should be entirely responsible for the arrangement and direction of all medical teaching, and that he should have the power to recommend all appointments, promotions and removals, that the free wards of all hospitals should be under his control as far as concerned medical patients, that he should have charge of the medical dispensaries and the use of this material for teaching purposes, with the power also to appoint and displace those working in the medical branches of the dispensary. He was also to have the power of appointing all medical interns and could suspend or discharge them with the approval of the Faculty, and the further power was given him of finally grading all students in the Department of Medicine, subject to the approval of the Faculty.

"On account of the above recommendation, which I endorse most heartily, I deemed that this department should be reorganized at once, as no further study was required, and it was only necessary to obtain the funds to carry out the reorganization and to find the proper man who should head this department." This has been accomplished.

The organization and management of the Hospital so that it will be most effective in the training of physicians and nurses requires a clear and definite fixing of responsibility on the part of those in charge of the several departments, as well as provisions for the fullest co-operation. This requires, first, a general Superintendent or Director, responsible to the President of the University; a Superintendent or Director of the Nurses' Training School, responsible either directly to the President or through the Dean of the Medical School, for the educational work, and to the Superintendent of the Hospital for the nursing work done in the Hospital. This plan is now in operation. In order, however, that the general policies of the Hospital and Training School may have most careful consideration, it has been thought wise to appoint an advisory council. At my request the Chairman of the Board of Regents, the Dean of the Medical School, the head of the Department of Surgery, and the head of the Department of Medicine have acted as a temporary council. The Superintendent of the Hospital, the Superintendent of Nurses and the Comptroller have attended most of the meetings. It is planned to select two lay members entirely outside the institution and two members nominated by the visiting staff, and also a representative of the Women's Auxiliary. Any suggestions as to a better plan are heartily welcomed. Constructive criticism, as well as commendation, is invited at all times. Only in this way shall we be able to work out a perfected organization.

Such suggestions and criticisms should be made to the responsible officials, such as heads of departments, superintendents, deans or the President. It is unnecessary, of course, to say that criticism of the University to people not responsible for it or to those who are not in a position to correct things that are wrong and those who may be looking for something to find fault with is not constructive and will not be indulged in or encouraged by any friend of the University.

AN ANALYTICAL STUDY OF EXTRACRANIAL ANEURISM OF THE INTERNAL CAROTID ARTERY OF SPONTANEOUS ORIGIN.

By Nathan Winslow.

(From the Surgical Department of the University of Maryland.)

In this, the second instalment* of my serial on extracranial aneurism of the internal carotid artery, I have attempted to assemble all of the examples of this lesion recorded in the literature as spontaneous. I realize that some cases may have been inadvertently overlooked. In an investigation of this character covering as it does many languages, oversights are inevitable. The cases cited fall naturally into two groups: (1) Those subjected to some form of radical arterial surgery (Table 1); (2) Those which were not (Table 2). The former number 25; the latter 14. The condition is of interest not only on account of the obscurity enveloping

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*First instalment, Bulletin School of Medicine, University of Maryland, 1922, vii, 84.

TABLE No. 1

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Operation, Date.	Cured.	Died. Cause.	Remarks.
1	Cooper: Lectures of, 3rd American Edit., 1831, vol. II, 62.	M 50 L	6 months.	Lig. C. C. A. 6-22-1808.	Yes.	....	First successful ligation of the common carotid artery for aneurism. Externally a swelling extending from the angle of the jaw to the thyroid cartilage; violent pain in the head, sense of pulsation in the brain. Compression on the sac caused its emptying, original size regained with one contraction of the heart. After op. the pulsation did not entirely cease; pain in head relieved immediately; scarcely an unpleasant symptom. The sac gradually shrivelled; obscure pulse present until September, 1808, then felt no longer. No mention of a lump in the throat. Notwithstanding the absence of this characteristic symptom, the case was classified by Wyeth, Prize Essay, Trans. Amer. Med. Assoc., 1878, XXIX, appendix, page 42, as an aneur. of the int. car., whilst the same author classes Cooper's first ligation of the common carotid in 1805 unsuccessful as a carotid aneurism.
2	Dupuytren: Lecons Orales de clin. chir., 1839, 2nd edit., vol. III, 56.	F 76 L	8 years.	Lig. C. C. A.* 1-19-1818.	....	8 days, of cerebral complications.	Entered Hôtel-Dieu, Jan. 14, 1818, for a knot which for the past three months had been growing rapidly. The lump extended from the hyoid bone to the lobule of the ear and from the angle of the jaw to the posterior border of the sterno-cleido-mastoid muscle, and was evident both at the back of the mouth and by a slight puffiness externally. It was ovoidal in shape, soft and elastic in consistency, and beat synchronously with the pulse and accompanied by a movement of expansion in every direction. By compression of the primary carotid the beats were arrested and the tumor slightly diminished in size. The overlying skin was healthy. The increased volume had produced dysphagia, difficulty in opening the mouth and a weakness in the left half of the tongue. The smashing of the column of blood against the tumor wall prevented rest or sleep at night. The artery was doubly ligated below the omohyoid muscle, and the beats disappeared, to return no more. The remainder of the day was passed very comfortably, and the patient did tolerably well until Jan., the 26th, the pulse then became small, irregular, feeble; the face flushed; the back achy; ideation incoherent and the wound foul. Death occurred on the 27th. Autopsy revealed an abscess at the seat of ligation. The brain was negative, but everywhere in the arterial system were deposits of lime salts. The aneurismal tumor was formed at the expense of the internal carotid artery and was about two inches in length. There was also a slight dilatation in the inferior mesentery artery and another in the left common iliac.

3	Porter: Dublin Hosp. Reports, 1830, V, 208; later in the Dublin Jl. of Med. Sciences, 1840, XVII, 83.	F 40 R	15 years.	Lig. C. C. A. 8-21-1829.	Yes.	....	Admitted Aug. 18, 1829, for a large tumor in the rt. side of the neck; visible externally, globular, tense and pulsated violently. Appeared 15 years previously as a small pulsating lump. At the end fo 7 years it had only attained the size of a small nut. Three weeks previous to admission the pt. struck her neck against a bed-post, after which accident the swelling increased very rapidly and became tender and painful to the touch. At that time she complained of rt. hemicrania. On examining her throat no pulsation could he seen within. Immediately after the oper. pulsation ceased in the mass. Two hours after op. the pt. complained of giddiness and numbness in the rt. arm. Four hours after the op. there was a very perceptible pulsation in the aneurism. She left the hospital two months after the op., to be readmitted four weeks later. About four months after the op. a suppurating sac burst. Discharged again early in March, 1830. On June 4, 1830, there had been no return of the condition, and the woman was at her occupation of servant. The patient died on September 7, 1836. Autopsy revealed the remnant of an aneurismal sac of the int. carot. Could ascribe the lesion to no definite cause.
4	Porter: The Dublin Jl. of Medical Sciences, 1840, XVII, 86.	M 38 L	5 weeks.	Lig. C. C. A. 9-22-1838.	....	Sec. Hem. 50th day.	Admitted Sept. 19, 1838, with a large aneur. in the lt. side of the neck, extending from ¾ of an inch above the clavicle to the mastoid bone and presenting both externally and internally. Viewed through the mouth the appearance of the mass was most alarming. Pulsation could be seen and the blood almost felt under the mucous membrane. The sac seemed ready to burst into the mouth. Only five weeks had elapsed since the patient first perceived a small, hard kernel near the angle of the jaw. It was then freely movable, without pain or pulsation. In the course of ten days it became sore, but not actually painful. Poultices were applied to bring it to a head unsuccessfully. Instead it increased in size and pulsated. Soon thereafter the man was attacked with hoarseness, which so alarmed him that he sought the hospital for relief. The common carotid was ligated just above the sternum. The patient bore the operation well. On the ligature being tied the pulsation in the aneurism ceased, never to return. The swelling became smaller and the patient declared himself free of pain. At first the case appeared to progress favorably, but on October 22 a change for the worse occurred. The pt. complained of headache and a stiffness in the neck. On Oct. 27th there was a distinctly fluctuating mass at the operative site and the patient suffered from cough, difficult respiration

TABLE No. 1—Continued.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Operation, Date.	Cured.	Died, Cause.	Remarks.
							and painful deglutition; so an incision was made into the swelling. This gave exit to much pus, mixed with fluid blood. On the morning of Oct. 30 the wound bled profusely, necessitating packing for its arrest. The hem. recurred on November 2, and was repeated at intervals to November 12, when the patient died. A post-mortem was refused.
5	Syme: London and Edinb. Month. Jl. Med. Sc., 1842, II, 961.	F 60 *	5 months.	Lig. C. C. A. April, 1842.	....	In 30 hours no assignable cause.	Syme saw this patient in consultation. The diagnosis was between abscess and aneurism, Syme leaning to the latter. Autopsy developed no assignable cause for the death.
6	Duke: Dublin Medical Press, 1848, XIX, 65.	M 32 R	1 year.	Lig. C. C. A.	....	5 weeks hem.	Duke was about to puncture a pharyngeal swelling when he introduced a finger and detected pulsation. He changed his diagnosis to aneurism. A consultant did not consider the condition so serious, and during a visit in the absence of Duke incised the aneurism, which act was followed by such a severe hemorrhage as to necessitate ligation. The operation was followed by slight paralysis.
7	Chassaignac: Bull. da la Soc. de chir. de Par., 1859, X, 83.	M 26 L	Short time.	Lig. C. C. A. August, 1859.	Yes.	....	Hemorrhage after puncture of a supposed retro-pharyngeal abscess calling for a ligation of the carotid artery, post-operative aphonia, headache for 24 hours. After one year complete recovery.
8	Godfray: Med. Times and Gazette, 1882, II, 409.	M 28 R	5 months.	Lig. C. C. A., just above the sternum. 7-30-1876.	Yes.	....	In Feb., 1876, the patient noticed a swelling in the rt. side of the neck, which gradually increased in size. On admission the mass extended from the angle of the jaw to within an inch and a half of the sternum; both pulsation and bruit were present and the lump looked as though it would burst at its hind part. The larynx and trachea were displaced to the left; swallowing attended with much difficulty from the first was now impossible. A syphilitic taint was evidenced by nodes in the tibia. After the operation the swelling diminished markedly, to enlarge again Aug. 27; inability to swallow returned and the larynx was again displaced on the lt. On Aug. 30 there was a violent hemorrhage, swelling as large as ever, no pulse or bruit. On Sept. 3 a needle was inserted into the mass and quantity of foul smelling blood withdrawn. Sept. 5th, after a fit of coughing, the sac burst into the pharynx and a quantity of blood and mucus was spit up. This was followed by great relief. The patient was discharged Sept. 11, 1876, cured. Sept., 1882, the man was enjoying good health.

9	Agnew: Trans. Amer. Surg. Assoc., 1886, IV, 252.	F Woman	8 months.	Lig. C. C. A., S. T. A. & L. A. 2 weeks later lig. of opposite C. C. A. In 1883.	....	In about three weeks of sepsis.	Two weeks after op. pulsation reappeared in the mass, for the relief of which opposite primitive carotid was tied. No sound or motion could then be detected. Soon afterwards the sac ulcerated into the pharynx. Through the rent a large amount of blood escaped. This was controlled by packing, but the patient died about a week after the last ligation.
10	Dubrueil: Gaz. méd. de Par., 1883, LIV, 6.s., 373 & 398.	F 38 L	6 months.	Lig. C. C. A. and later same day lig. same C. C. A., E. C. A., I. C. A. & S. T. A. 5-29-1883.	....	14 days hemiplegia.	Swelling of the left soft palate disturbance of speech and deglutition, of hard consistence, no fluctuation or pulsation, led to a diagnosis of adenoma or sarcoma. In an attempt at enucleation the sac was torn setting loose such a free hemorrhage as to call for lig. of the carotid. This controlled the bleeding, so the patient was returned to bed. An hour and a half later a repetition of the bleeding necessitated ligation of the same carotid at a higher level. As a further safeguard the other vessels mentioned were tied also. Immediately after the first lig. aphonia and disturbed respiration supervened. On June 10 the pt. was afflicted with a hemiplegia on the same side as the operation. June 11 the woman lapsed into coma and died June 12, 1883. Autopsy revealed an aneurism of the internal carotid in its extracranial course. The vagus nerve was caught up in the primary ligation; hemorrhage base of brain right side.
11	Wyeth: New York Med. Jl., 1883, XXXVIII, 428.	F 60 L	10 years.	Lig. C. C. A., E. C. A. & S. T. A. In 1883.	Yes.	....	Decreased in size almost to the vanishing point. When last seen she was perfectly well.
12	Creus: El Genio Medico-Quirurgico, 1884, XXX, 191.	F 63 R	2 years.	Lig. C. C. A. 4-13-1884.	Yes.	....	Interference of swallowing of both solids and liquids, dyspnoea, more pronounced on some occasions than at other times, and a gradually increasing lump in the throat extending inwards and pushing the soft palate and tonsil to the mid-line. Intraocular inspection revealed the mass to be beating synchronously with the pulse. It occupied the rt. side of the pharynx, was smooth superficially, oval in shape, expansile in character. Pulsation was arrested by compressing the carotid. Upon the application of a stethoscope to the growth a bruit was heard, but no thrill could be detected. No cause could be assigned for the aneurism. There was no evidence of syphilis. After operation the mass decreased in size, swallowing was facilitated, breathing improved and pulsation arrested. The pt. was discharged April 3, 1884, cured.

TABLE No. 1—Continued.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Operation, Date.	Cured.	Died, Cause.	Remarks.
13	Hulbert: St. Louis Cour. Med., 1886, XVI, 265.	F 19 R	.....	Lig. C. C. A.	....	On table while in process of lig. I. C. A.	At first the lesion was diagnosed as abscess, and punctured with the withdrawal of pure blood, then diag. was changed to aneurism. During the process of isolating the internal carotid the sac burst into the mouth. A temporary ligature which had been placed around the common carotid for emergency purposes was promptly tightened. Although this manoeuver controlled the further escape of blood from the sac, the pt. died on the table of asphyxia from blood aspirated into the bronchi, notwithstanding a prompt tracheotomy.
14	Clementi: La Riforma Medica, 1890, VI, part 1, 478. Translated from the original for this paper by Salvatore Demarco, University of Maryland.	F 24 L	1 year.	Lig. C. C. A. 8-3-1889.	Yes.	....	Tumor below and in front of lt. ear, increasing pulsation, no cause, ovoid, extending from cricoid cartilage to the mastoid bone, internally a bulging pulsating mass pushing the tonsil toward the right, bruit on auscultation. Compression was practised for 26 days without benefit, then discontinued on account of pain and fever in favor of ligation. After 4 months complete cure, mass much smaller, non-pulsating and the lt. tonsil symmetrical with the right.
15	Polak: Weekblad. Nedrl. Tijdshft, 1900, XXXVI, part 1, 1213.	F 65 L	......	Lig. C. C. A., then lig. C. C. A. and division. 9-27-1894. 4-24-1895.	**Yes.**	....	Pt. had in the lt. side of the neck a potato sized mass that was growing; buzzing sounds in the ear and attacks of dizziness. Pulsation was evident to sight and touch. Compression of the carotid caused a partial collapse in the volume of the mass. On the rt. side of the neck in the course of the external carotid was a pulsating tumor the size of a hazel nut. A diagnosis of bilateral carotid aneurism, without assignable cause was made. After first operation double ligaturing, the pt. made an uneventful recovery. When discharged some weeks later the aneurism of the rt. external carotid had about disappeared from self-applied compression. Five months later the woman again sought treatment for a return of symptoms in the left side of the neck. The left common carotid was exposed a second time, April 24, 1895. It was at this time that the aneurism was seen to be arising from the internal carotid. Some weeks after the second operation a slight pulsation could be observed in a small, hard mass. Five years later the patient again resorted to Polak with the complaint of sleeplessness, annoying beating in the rt. side of the neck, dizziness, phenomena which she ascribed to an aneurism of the right external carotid that had gradually attained the size of a hen's egg, for which symptoms she sought relief by operation. March 22, 1900, the right common carotid was ligated. The patient, now 71 years of age, recovered without bad symptoms and left the hospital ten days later.

16	Narath: Nederl, Tijdshft., v. Geneesk Amst., 1903 2 R. XXXIX, 1174.	M 28 R	4 years.	Lig. C. C. A., E. C. A., I. C. A. 2-1-1897.	Yes.	....	The pt. was first seen Jan. 21, 1897. With the exception of a lump in the rt. side of the neck, which began 4 years previously, he had always been healthy. He attributed the lesion to the lifting of a heavy burden. He sought medical advice because the mass had taken on increased activity, was causing trouble in swallowing and rt. hemicrania. He was single and of a robust constitution. He had never had lues, nor could any stigmata be found. There was no evidence of arterio-sclerosis. In the rt. side of the neck was a mass the size of a fist, which pulsated and expanded throughout and pushed the soft structures to the left. There were no cerebral disturbances other than headache. It was impossible to place a ligature above the sac, so the common carotid was doubly ligated and divided between. As pulsation continued the external carotid and the lower side of the internal were doubly ligated and divided. Now the pulsation ceased. The pt. was discharged Feb. 26, 1897, at which time the lump was appreciably smaller, and did not pulsate or cause pain. The man was living and well five years after the operation.
17	Mayo, C. H.: St. Paul Med. Jl., 1899, 1, 751.	F 23 R	6 years.	Lig. C. C. A. 8-2-1899.	Yes.	....	External lesion presented behind the jaw in front of and beneath the ear. Internally there was a bulging of the rt, pharyngeal wall. The mass pulsated and a bruit was heard.
18	Helferich in Werner: Zeitshft f. Chir., 1902, LXVII, 592.	F 58 R	8 months.	Lig. C. C. A. & I. C. A. 5-3-1902.	Yes.	....	Right pharyngeal tumefaction, no cause, hard lump, no pulsation or fluctation, superficially smooth, exploratory puncture, no liquid withdrawn, diagnosed lympho-sarcoma and buccal extirpation attempted, rupture of sac, complicated by a profuse hemorrhage, oral tamponing, low traceotomy, temporary resection of the mandible, exploration of the aneurism, peripheral lig. of the internal carotid. The intervention was followed by postoperative paralysis of the hypoglossal and some disturbance to deglutition. The patient was discharged June 20, 1902.
19	van Campen: Nederl. Tijdshft. v. Geneesk., Amst., 1903, 2 R., XXXIX, 1172.	F 58 R	......	Lig. C. C. A.	Yes.	....	She appeared in June 1902, with the complaint of a strange feeling in the throat and change in the voice, buzzing in the head. She first noticed an indefinite puffiness in the right side of the neck. In the rear of the mouth one could see a tumor similar to the external swelling. It sprang from the rt, pharyngeal wall and made one immediately think of abscess. The evident pulsation communicated to the palpating finger rendered this supposition untenable. As the case progressed swallowing and drinking could only be accomplished with difficulty. A finger now inserted into the mouth perceived this portion of

TABLE No. 1—Continued.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Operation, Date.	Cured.	Died. Cause.	Remarks.
							the mass to have so increased in size as to close off the fauces, though it had not grown externally. After operation the lump in the mouth decreased in size, pulsation was arrested and the woman regained the power of swallowing. She was discharged cured.
20	McMullen & Stanton: Annals of Surgery, 1910, LI, 76.	F 60 R	1 year.	Endoaneurismorrhaphy. 12-29-1908.	....	20 days sec. hem.	Fifteen days after the operation the patient was discharged, apparently well; 3 days later she returned with a hematoma under the scar. This was opened on the 20th day, followed by a profuse hemorrhage. Attempts to clamp the vessel above the sac failed on account of the friability of the tissues. Arrest of bleeding was finally obtained by packing the sac. However, the patient went into collapse and died in a few hours.
21	Perthes in Keppler: Inaugural - Dissertation, Univ. of Leipzig, 1910.	F 44 L	3 months.	Lig. C. C. A., E. C. A. and the I. C. A. above the sac, extirpation of the sac. 7-19-1909.	....	July 26, 1909, hemplegia.	Widow with 2 children and no miscarriages, had noticed a fullness in the neck for 3 months. Her only complaint was a sensation of a clod stuck in her throat and dyspnoea, for which she consulted Lohse. He detected a firm elastic mass in the left side of the pharynx and wavered in the diagnosis between aneurism and abscess. There was no discernible schlerosis of the palpable arteries. Intra-oral inspection revealed a tumor behind the post-pillar with a smooth surface and covered with a normal mucous membrane. It was firm and elastic in consistency and pulsated. In order to clear up the diagnosis exploratory puncture was made and pure blood aspirated. Upon withdrawal of the needle there was but slight leakage from the wound, which after one minute completely ceased. Upon auscultation behind the left jaw a bruit was heard. The mass sprung from the left lateral pharyngeal wall and projected inwards to the medium line. Upon deep palpation behind the angle of the jaw the finger was raised by the beats. After ligation of the common carotid the pulse forthwith disappeared, but the sac if squeezed empty refilled tolerably quickly. About 9 hours after the operation the patient suddenly lost the ability to talk and developed in addition paralysis of the right arm and rt. side of the face, fully conscious, no pain in head, spasms of the right extremities. There was no improvement and the woman died July 26, 1909. Autopsy revealed a thrombosis of the left anterior cerebral artery and its branches, and softening of the anterior two-thirds of the left cerebrum. The walls of the aneurism showed no calcium deposits and felt smooth and soft.

	Revist. de Chir., Bucuresti, 1909, XIII, 596. Translated from the original for this paper by Jacob A. Greenberg, Univ. of Maryland.	23 R	years.	Lig. C. C. A.	Yes.	....	This patient had in addition to a fusiform aneurism of the cervical portion of the internal carotid, an intracranial aneurism of the same vessel, the sac of which projected into the orbit. She entered the hospital for rt. hemicrania, noises in the head, more annoying at night, insomnia, exophthalmos and epistaxis. The orbital sac visibly pulsated and exhibited a systolic blow. Upon compression its size was lessened, but it immediately regained its original volume upon the release of the pressure. The swelling in the neck was fusiform in shape. It expanded throughout and had a systolic blow. Its volume was notably diminished by compression of the primitive carotid. Fearing imminent rupture of the cephalic aneurism, an attempt was made to extirpate it through the orbit, but the thinned sac ruptured during the manipulations. A finger was inserted into the rent and the escaping blood checked. Not until the common carotid was ligated was the finger withdrawn from the hole in the sac. Bleeding recurred, but in considerably less amount. This was entirely stopped by invaginating the sac with a sterile cork stopper placed in the hole and held in position by suturing the overlying skin. At the time of the report the buried cork had been borne well. Although no history of syphilis could be obtained, the patient was given antiluetic medication. She was finally discharged as cured.
23	Moser: Inaugural Dissertation, Kaiser Wilhelms University, Strasburg, 1911, p. 7.	F 60 R	6 days.	Lig. C. C. A. & I. C. A., above & below, extirpation of sac. 7-7-1910.	Yes.	....	The woman had gone through two pregnancies, since which she had been hale and hearty. Six days before admission she had lifted a bundle of wet grass to her head. The next day she noticed a roaring in the right ear and pains in the teeth of the right side. On the day following she observed a lump in the right side of the neck. Though this gave rise to no pain, as the buzzing had become worse and headache had set in, she sought the hospital July 5, 1910, for relief. In the right side of the neck below the angle of the jaw was a firm, elastic knot about the size of a hen's egg. It was oval in shape and pulsated synchronously with the radial artery. The palpating finger felt a whir. Upon auscultation a rhythmical bruit was heard. On compression of the common carotid pulsation disappeared. When compressed the mass was easily emptied, but refilled promptly when the compression was removed. Inspection by sight and touch demonstrated nothing abnormal in the mouth. First the primitive carotid was tied, then the internal carotid on the cardiac side of the sac by two ligatures between which the vessel was divided. Next the sac which had continued filled was dissected free from the surrounding structures. After the afferent twig had

TABLE No. 1—Concluded.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Operation, Date.	Cured.	Died. Cause.	Remarks.
							been located and isolated, it was likewise divided between two ligatures and the sac delivered. Drainage was obtained by a wick of iodoform gauze. After arousing from the anesthetic the patient complained of severe pain in the right side of the head, some impediment to the speech and a slight paralysis of the right arm and leg and the lower left side of the face. July 8 dysphagia set in, but no sensory disturbances were noted. By July 10 the motor disturbances had almost entirely disappeared. She was discharged July 31, 1910, in good condition. The wound was completely healed. There was no evidence of arterio-schlerosis in the extirpated sac.
24	Shipley & Lynn: Jl. Amer. Med. Ass., 1916, LXVI, 1602.	F 41 L	About 2 years.	Lig. C. C. A. & E. C. A. 1-31-1915.	**Yes.**	....	Six months after operation pulsation had returned, but in weaker form. There were no cerebral symptoms at or after operation. The patient was alive April 29 1922. She was symptomatically cured, being entirely free of any disagreeable symptoms.
25	Winslow: Annals of Surgery, 1922, LXXV, 694.	F 48 R	9 months.	Lig. C. C. A. & E. C. A. 2-1-1921.	**Yes.**	....	After operation the patient complained of a slight headache for a few days. When last heard from, Dec. 28, 1922, the woman was entirely cured; the swelling had disappeared; no bruit could be heard; no pulsation was detectable. She could swallow beverages and solids with perfect satisfaction; the roaring in the right ear had ceased and the jarring of the head gone.

TABLE No. 2.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Cured.	Died, Cause.	Remarks.
26	Perier: Receuil de mém. de méd. et de chir. et de phar. militaires, 1854, 2.s., XIV, 311.	M 19 L	14 days	.....	Soon hem.	The patient was thrown from a horse 2 months previously, spraining his left wrist but incurring no other injury as far as could be determined. On Nov. 26. 1843, he was admitted to the infirmary for the injured wrist. December 4 he complained of a slight pain in the neighborhood of the left temporo-maxillary joint, but no swelling or change of color in the skin. Even at that period movements of the articulation were embarrassed and limited. He was suffering also with pain and rumbling in the left ear. Exploration of the mouth revealed nothing abnormal. On Dec. 7 a slight swelling was detected behind the angle of the jaw, and the jaws could scarcely be opened sufficiently to permit the introduction of the little finger. The velum of the palate was pushed by a tumor far towards the right. The patient could swallow beverages only, and with difficulty. The external tumor was deep seated, non-painful to pressure and obscurely pulsating. On the night of Dec. 9 the patient hemorrhaged from the nose and mouth. On the 12th, 15th and 17th there was a repetition of the bleeding. Though the symptoms were obscure, the author was convinced he had to deal with an aneurism of the internal carotid and requested a consultation. On Dec 18, while Recamier was introducing a finger into the mouth, the sac ruptured and the patient soon expired. Autopsy definitely determined the bleeding to be from an aneurism of the extracranial portion of the internal carotid artery, which had ruptured into the throat.
27	Pircher: Wien. Med., Wochsft., 1862, p. 553.	F 8 L	1 month	.....	1 month hem.	This case was diagnosed as abscess. The patient could not open the mouth, swelling presented externally; made an incision, but did not reach the abscess cavity; no pus withdrawn; called in consultants, who were of the opinion that the lesion was inflammatory; on their advice inserted a trocar, again without result. Child died suddenly Feb. 7, 1862, of hemorrhage into the mouth. Autopsy revealed a large aneurism on the internal carotid artery.
28	Vander Veer: Trans. Amer. Surg. Assoc., 1886, IV., 253.	M 40 L	2 months	.....	About 3 months suddenly; apparently of cerebral embolism.	This man was treated on two separate occasions by digital compression to the common carotid artery. After apparently having been cured, he experienced one day a terrible pain in the head and suddenly fell over dead. Autopsy could determine no definite cause for the death.
29	Coomes: The Medical Herald, 1885, VII, 503.	F Woman L	10 days	.....	10 days hem.	This patient was seen first Dec. 14, 1885, for uncontrollable bleeding from the mouth and nose. It was only after several days' observation that pulsation was detected, both internally and externally, also a lump both on the inside and the outside of the mouth. Bleeding recurred at intervals until Dec. 23, when the patient died. The diagnosis of aneurism of the internal carotid artery was confirmed at autopsy.
30	Richardson. Jl. Amer. Med. Ass., 1890, XV, 180.	F 35 R	Short time	Unimproved.	....	This patient presented a bulging, pulsating mass in the right lateral pharyngeal wall which reached to about the mid line of the pharyngeal canal. Pressure on the common carotid artery caused the tumor to diminish in size, with a complete cessation of pulsation. A distinct and high-pitched bruit was heard. The woman refused to appear before the District of Columbia Medical Soc. for consultative purposes, discharged her physician and drifted out of sight. She had received no treatment.

TABLE No. 2—Continued.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Cured.	Died, Cause.	Remarks.
31	Edmunds: Trans. Path. Soc. London, 1891, XLIII, 42	M 36 R	1 month	.....	12 days coma.	This man presented a pulsating tumor in the right side of the neck, rapidly increasing in size; no pain or discomfort, giddiness, lues 12 years previously. Examination caused attacks of giddiness, fainting, so operation was withheld. Autopsy showed an aneurism of the internal carotid artery close to its origin.
32	Minich: Pest. med. chir. Presse, Buda Pest, 1901, XXXVIII, 765.	F 30	3 weeks	.....	3 days hem.	A 30-year-old servant, Minich relates, applied to a physician with the complaint of an intrabuccal swelling of 3 weeks' duration and dyspnoea. Mistaking the tumefaction for an abscess, the doctor made an incision into it, obtaining pure blood, the arrest of which was secured only with difficulty. Two days later a mortal hemorrhage occurred. Despite its superficial situation the aneurism exhibited neither pulsation nor fluctuation. The post-mortem examination showed a sacciform aneurism of the extracranial portion of the internal carotid at the base of the skull and projecting into the pharynx. The report made no mention of the side, nor when, where, nor by whom supervised. In the discussion Ihrig cites quite a similar case observed in the second surgical clinic in 1894, which ruptured spontaneously, but gives no data.
33	Texier: Bull. méd. Par.	F 74 L	1 year	.....	7 days cerebral symptoms.	The patient sought medical advice Nov. 22, 1906, for throat trouble. She had a tumor in her throat for a year. It occupied the entire left half of the pharynx and pushed the tonsil and uvula to the right. Externally there was no suggestion of a swelling to either the eye or touch. The lump in the mouth did not pulsate, and as it was soft in its upper portion, was thought to be a pharyngeal abscess. A trocar stuck into it for diagnostic purposes withdrew pure blood. From the findings the impression was aneurism of the internal carotid or perhaps injury to a vessel in a very vascular tumor. The woman died Nov. 29, 1906, in coma. Autopsy showed the presence of an extracranial aneurism of the internal carotid artery about the size of a hen's egg, without assignable cause. The coma was attributed to cerebral edema.
34	Texier: Bull. méd. Paris, 1907, XXI, 593.	F 47 L	Short time	Unimproved.	....	This patient was seen March 6, 1907, for a swelling in the throat discovered by chance; no uncomfortable symptoms save an occasional sensation of an obstacle in the throat and a slight impediment to breathing at night. The patient had never been sick. She had never experienced any noises in the ear. There was a swelling in the left side of the throat which pushed the tonsil and pharyngeal wall inwards toward the mid line. Its surface was smooth and red. There was no pulsation except at its lower end. A soft bruit was heard both internally and externally. Iodide of potassium was advised and the patient requested to return in some months, reserving till then the advisability of ligating the carotid artery.
35	Texier et Levesque: Gaz. Méd. de Nantes, 1910, XXVIII, 466.	F 42 L	......	Unimproved.	....	This patient complained of a swelling situated in the left wall of the pharynx. She stated she felt very clearly pulsation corresponding to the beats of the pulse, in the half of the head and neck of the diseased side. The mass occupied the entire left half of the buccal pharynx. It was about the size of a pigeon's egg and pushed in front of it the posterior pillar of the tonsil and a little of the soft palate. The overlying mucous membrane was normal. Externally there was no appreciable fullness and the pulsation was no more pronounced than on the opposite side. The tumefaction was not tender to touch, not expansile, not pulsatile. Bimanual palpation with a finger within the mouth and another without could detect no pulsation nor fluctuation. Ligation

						four small children. Instead she was placed on antiluetic treatment and ordered to return in several months for further investigation.
36	Wagner in Keppler: Inaugural-Dissertation, University of Leipzig, 1910, p. 14.	.. Child ..	......	.....	Hem. from spontaneous rupture of sac.	Related by Lohse, cited by Keppler and told by Wagner of an instance when late one evening he had been called to open a tonsillar abscess. Much to his embarrassment, when he put his hand into his pocket for his scalpel he found he had forgotten the instrument. To his horror, much to his happiness, he had forgotten the knife, for when he returned early next morning he learned the child had died suddenly during the night. The aneurism, for such it was, had burst. He naively adds, "Discite moniti," that is, learn by the warning.
37	Liébault et Daudin-Clavaud: Arch. gén. de chir. de Paris, 1912, VIII, 1436.	F 75 R	18 months	Unimproved.	....	This patient entered the clinic July 10, 1912, with the complaint of a tumor in the mouth which bothered her, difficulty in swallowing, impairment in speech, otherwise she felt well. She experienced no pain. She denied ever having had lues. On opening the mouth a mass which almost completely obstructed the oro-pharynx was perceived. The swelling was chiefly behind the velum and bulged convexly inwards from the right pharyngeal wall. The mass was smooth, regular, tense and covered with healthy mucous membrane. To the examining finger it pulsated synchronously with the radial artery. It was expansile. Nothing abnormal was seen externally. Pressure on the common carotid arrested the pulsation forthwith. No souffle was heard. In view of these findings Moure proposed ligation, but the woman refused the advice. She was seen by the authors later, the mass had increased in volume, leaving now only a narrow slit on the left side for the passage of food. Despite the urgency of the condition, the patient still refused operative relief.
38	Velebil: Casopis Lékaruv Ceskych, Prague, 1913, LII, 975. Translated from the original for this paper by V. Joska, Univ. of Maryland.	M 4¾ R	About 3 weeks	.....	Jan. 4, 1913. hem. from mouth.	The patient was admitted to the service of Pesiny Dec. 26, 1912, for a progressively increasing pain in the neck, fever and delirium of 3 weeks' duration. The tonsils were enlarged and congested, and springing from the right side of the pharynx was a bulging mass the size of a pigeon's egg. It was red, soft to touch and did not pulsate. A hard, painless tumor was felt beneath the angle of the right jaw. In the right retro-auricular space was seen an enlargement about the size of a hazel nut. It was soft and weakly pulsatile. The pulsation was stopped by pressure, but upon the release of the compression the mass again began to beat. Otherwise the physical examination was essentially negative. Although a retropharyngeal abscess was suspected, operation was withheld because of the pulsations synchronous with those of the large vessels of the neck. Since admission the temperature had never been over 98.4 F. The condition remained unchanged until Jan. 2, 1913, when at 6 A. M. there was a profuse outpouring of blood from the mouth, which was soon arrested. The child now felt better. On Jan. 4 Kafkovi made without anesthesia a 2½ cm. incision over the external swelling and removed a small amount of bloody exudate. During the procedure the child began to cough, and spat up a large quantity of blood. The wound was hastily packed and the common carotid artery compressed without influencing the bleeding. Notwithstanding the hemorrhage was stilled immediately the pharynx was tamponed, the patient died. The autopsy performed the next day by Kimla showed the presence of an aneurism of the internal carotid artery somewhat above its origin, about the size of a hazelnut. The sac lay close to the base of the skull and communicated with the lumen of the internal carotid, and was the cause of the bulging of the pharyngeal walls. At the summit of the aneurismal sac was a vent into the pharynx. The interior of the sac was lined throughout with endothelium which merged with that of the lumen of the artery. In the cavity of the sac were several hard clots of blood. No cause could be advanced for the occurrence of the aneurism.

TABLE No. 2—Concluded.

No.	Surgeon, Reference.	Sex, Age, Side.	Duration.	Cured.	Died, Cause.	Remarks.
39	Cannuyt Archives Franco-Belges de Chirurgie, Brussels, 1921-1922, XXV, 404.	F 58 L	......	Unimproved.	....	The essential features of the history were: At the beginning of the winter of 1918-1919 the patient had an attack of grippe, after which she noticed that she had disturbance of speech, difficulty in swallowing, interference with the movements of the tongue, but no pain. She had had two miscarriages. By deep palpation a small, doughy tumor was detected behind the angle of the left mandible. On intrabuccal inspection the left side of the pharynx was the seat of a bulging mass. To touch this swelling was soft and pulsated in an expansile manner, as determined with a finger within the mouth and another on the outside of the neck. Digital compression to the common carotid artery arrested the pulsation and caused the lump to decrease in size. As soon as the pressure was removed the mass regained its original volume and pulsated as vigorously as ever. Exploratory puncture gave up pure blood. The structures supplied by the 9, 10, 11 and 12 cranial nerves were parlyzed, i. e., the left side of the soft palate, tongue, vocal cord, sterno-cleido-mastoid and trapezius muscles; gustatory sensations were diminished on the left side and the patient was hoarse. A skiagraph of the cervical vertebrae showed nothing abnormal. A blood serum test was negative. Although there was nothing in the history suggestive of a specific origin of the aneurism except the two miscarriages, a course of biniodide of mercury was instituted and prolonged compression to the vessel, after which the author hoped to make a ligation of the common carotid artery. The writer located the aneurism at the base of the skull and considered it of spontaneous origin.

it, when it does occur; but also because of the many mistakes in diagnosis which have led to the inadvisable use of the lancet with unfortunate results. Such accidents have been only too frequent and exemplify the importance of regarding as aneurism, until proven otherwise, every unilateral swelling located in the neighborhood of the tonsil, By adopting this precaution the medical attendant may avoid the embarrassment of opening an aneurism for an abscess.

The cases number 39; of which 28 were women; 10 were men, and 1 was a child with sex not given. These figures are just the reverse of the usual order of events, as eneurism elsewhere is by far more prevalent in the male than in the female. As to the why or wherefore for this turnabout, I can offer no explanation; I can only submit the result of my investigation. The ages were 4¾, 8, 19, 19, 23, 23, 24, 26, 28, 28, 30, 32, 35, 36, 38, 38, 40, 40, 41,42, 44, 47, 48, 50, 58, 58, 58, 60, 60, 60, 60, 63, 65, 74, 75 and 76 years respectively. In two the patients were simply described as women; in one as a child. The right side was affected 17 times; the left 18, not stated 4. 16 recovered; 18 died and 5 were unimproved. 25 were operated upon. Of these, 9 (36%) died; and 16 (64%) were cured. The operative fatalities were given as follows: hemorrhage, 3 times; cerebral complications, 1; hemiplegia, 2; on the operating table from spontaneous rupture of sac into mouth and asphyxia, 1; sepsis, 1; and no assignable cause, 1. 14 cases were not operated upon, with 9 deaths or a mortality of 64.28%; the remaining 5 (35.72%) were unimproved when discharged. No spontaneous recoveries were reported. These figures are a potent argument for radical arterial intervention in this lesion. The deaths in the unoperated cases were attributed to hemorrhage, 6 times; coma, 1; cerebral symptoms, 1; undetermined, 1. The imposition of almost insurmountable anatomical difficulties to direct attack upon the sac renders ligation of the common carotid alone or in combination; or of the internal carotid alone when the circumstances are propitious, the operations of choice. Once only was aneurismorrhaphy attempted, with death of the patient from secondary hemorrhage at the suture line.

The vessels ligated and the results were:

Common carotid; 13 times, with 8 cures and 5 deaths.

Common and external carotids; 2 times, both patients were cured.

Common and external carotids and superior thyroid; once, with cure.

Common carotid, repeated with division 5 months later for return: 1, cured.

Common, internal and external carotids; once with cure.

Common and internal carotids; once, with cure.

Common, external and internal carotids with extirpation of sac; 1, died.

Common and internal carotids, above and below sac and extirpation of sac; once, cured.

Common carotid, superior thyroid, lingual and opposite common carotid; once, with death.

Common carotid, repeated later the same day and in addition the external and internal carotids and superior thyroid; once, with death.

Common carotid and plugging of hole in an orbital sac with a piece of cork, opened accidentally, on account of two aneurisms, one in the neck, and one partly within the cranium and partly orbital; once, with cure.

Chassaignac lanced a retropharyngeal swelling for abscess, but fortunately cured the patient by ligation of the common carotid artery. Dubrueil mistook a pharyngeal swelling for sarcoma and during an attempt at enucleation tore the sac wall. The escaping blood was arrested by a ligation of the common, internal and external carotids and the superior thyroid arteries, but the patient died 14 days later of hemiplegia. Helferich had the same accident befall him, but fortunately saved his patient by a ligation of the common and internal carotids. Hulbert was saved a similar fate when he inserted a needle into the sac and withdrew pure blood. Though Agnew ligated both common carotids and the superior thyroid and lingual arteries on the side of the lesion, the current was re-established in the internal carotid, with rupture of the sac and death from sepsis. The case of Jianu's is very extraordinary. There were two aneurisms in the course of the internal carotid, one cervical and the second projecting from within the cranium into the orbit and presenting at the naso-orbital junction. During an attempt to enucleate the latter Jianu tore the sac wall. To control the escaping blood he inserted a finger into the hole and then proceeded to ligate the common carotid. As there was still some oozing from the rent after this was accomplished, Jianu invaginated the sac wall with a piece of cork and sutured the skin over it to keep it in place. Happily the patient recovered. Radical arterial surgery needs no further brief than 64% cures against none when dilatory tactics were employed. Another lesson taught by these studies is: in the presence of an unilateral pharyngeal swelling before puncture listen, feel and touch. Amongst others Minich reported a case which the attending physician had lanced for abscess. With difficulty the hemorrhage was checked but two days later recurred and could not be arrested. In this case neither pulsation nor fluctuation was felt. Wagner was spared a like experience by forgetting to take along his instruments. When he returned the next day he was told the patient had died during the night of hemorrhage from the mouth.

Vander Veer believed he had effected a cure by digital compression of the common carotid artery, but three months after the initiation of the treatment, the man fell dead. Edmunds refrained from operation because examination caused giddy spells and faintness. The cases of Perier, Pircher, Coomes and Wagner are a grim reminder that death ever threatens from spontaneous rupture of the sac into the mouth when the proper surgical measures are withheld.

Though not confined to the internal carotid, a case of aneurism involving all three carotids reported by Walshman (Proc. Roy. Med. and Surg. Trans., Lond., 1899, 3 s., xii, 71; Med. and Surg. Trans., Lond., 1899 lxxxii, 223) merits notice here. The patient was a man, forty-nine years old, with the complaint of a swelling in the right side of the neck of six years' duration. The growth was the size of a cricket ball, globular, hard and extended from the jaw almost to the clavicle. It did not pulsate, and, until operation, was suspected as a malignant tumor. A trocar was inserted into the lump, but failed to evacuate blood. There was no bulging in the throat, no dyspnea, no dysphagia. The operation done December 5, 1895, consisted of ligation of the common, external and internal carotids and enucleation of the sac. The patient was cured. In the University Magazine, 1889, i, 340, Deaver cites a similar experience. The patient, a man, aged 46, consulted Deaver in 1888 for a swelling in the right side of the neck of 20 years' duration. It was stated all three carotids were involved in the dilatation. The common carotid artery was tied in the inferior carotid triangle, September 25, 1888. A complete cure ensued. Prosser (Br. Med. Jl. 1897, i, 530) and Langenbuch (Reunion libre des chir. de Berl., Séance du 14 Dec., 1891, in Mercredi méd., 1892, iii, 21) report cases that have been cited as aneurism of the internal carotid artery, but owing to insufficient evidence, have been omitted from the tabulation. Prosser showed a woman, aged 70, at the February 17, 1897, meeting of the Midland Medical Society. She had for a number of years a pulsating tumor in front of the right ear. Pulsation disappeared after ligation of the common carotid artery, and the swelling diminished, but before very long reappeared. Considerable hemorrhagic oozing occurred from the swelling, but was controlled by the local application of styptics. In the year 1890, a woman, aged 66, presented herself at Langenbuch's clinic with a pulsating tumor occupying the left lateral portion of the neck. A souffle was audible. Touch showed it a fusiform dilatation of the internal and external carotids. Ligation was not practised because of the age of the patient. An attempt was made merely to narrow the lumen of the vessel by means of a silk ligature so as to lessen but not interrupt the current of blood. Following this procedure the pain and pulsation were less intense.

Ludwig Meyer (Archiv. f. Psychiatrie, Berl., 1875, vi, 84) in an article entitled "Ueber aneurysmatische Veraenderungen der Carotis interna Geisterkranker," reports what he believes eight examples of aneurism of the extra-cranial portion of the internal carotid artery. All of the observations were made at autopsy upon mentally deranged patients. From the solitary illustration featuring the article and the subject matter of the text, the condition appears rather to have been a slight thickening of the arterial wall at its point of origin. Shaefer (Allgemeine Zeitsft. f. Psychiat. u. Psychisch-Gerichtliche Medic., 1887, 4 s., xxxiv, 483) in an article, Ueber die aneurysmatische Erweiterung der Carotis interna an ihren Ursprung," following the lead of Meyer describes the same condition as aneurism. Macfarlan (Jour. of Ophthal., Otol. and Laryngol., 1920, xxiv, 390) does not offer sufficient proof to justify the acceptance of his cases as aneurisms of the cervical portion of the internal carotid artery. The first observation concerned a woman, aged 58, who sought relief for a whistling noise in the right ear of two years' duration, which kept her awake at night. Listening in the region of the right ear Macfarlan heard a slight systolic murmur, synchronous with the pulse. The neck did not pulsate. The author thought the condition due to an extracranial aneurism of the internal carotid, located near the base of the skull. The second patient, a woman, aged 62, first complained of ear noises in March, 1920. These became gradually worse and prevented sleep. May 8th a slight pulsation was seen in the upper part of the neck in front of the left sterno-cleido-mastoid muscle. Listening over this area with a stethoscope a faint bruit was heard. It was blowing and in unison with the pulse. The disability was attributed to an aneurism of the upper portion of the common carotid artery or of the beginning of the internal carotid. On the other hand, though wanting in data, the case of Hodgson's, related by Partridge (Lancet, Lond., 1842, i, 866) in the discussion of Liston's address, has every appearance of being a genuine aneurism of the internal carotid. The patient was a child 9 years old, with involvement of all three coats of the artery.

The cases of Hunter and Marchal quoted by Wyeth (Trans. Amer. Med. Assoc., 1878, xxix, Prize Essay, appendix, pp. 58 and 56) though very suggestive, could not be confirmed. Hunter's patient was a woman, aged 60, with an aneurism in the mouth, for which ligation of the common carotid artery was practised August 3, 1843, followed four days later by death. On the other hand, Marchal opened an aneurism for an abscess. To arrest the bleeding he ligated first the external carotid artery but did not bring the hemorrhage under control until the common carotid artery was also tied. The patient was a man, aged 25, with a swelling in the left side of the throat of two months' duration. The operation was done June 19, 1835, but the patient died 6 days afterwards of cerebral complications (Norris: The American Jour. of the Med. Sc., 1847, n. s., xiv, 14).

RETROSPECT AND PROSPECT.

By Randolph Winslow, M. D., LL. D.

(*President's Address, 34th Annual Session of the Southern Surgical Association, Pinehurst, N. C., December* 13, 14, 15, 1921.)

Fellows of the Southern Surgical Association:

For the great and unexpected honor of being your presiding officer at this, the 34th annual session, I tender my most grateful thanks. That you have judged me worthy of this distinction is a source of the most profound satisfaction to me, though mingled with the sense of my own shortcomings; and yet in one respect it may not be inappropriate that I should be your president at this time, since I was born in this state and lived here in my youth, during the stormy time of the Civil War. Although I have lived for more than a half century in the City of Baltimore, I still love the "old North State," and the honor of being president of this distinguished body is enhanced by the fact that this annual session is held in the state in which I first saw the light of day. Fifty years ago I began the study of medicine at the University of Maryland and, as was usual at that time, was graduated after an attendance on two short courses of lectures. Since then I have witnessed the stupendous changes in the science and art of medicine which as a panorama has unfolded itself before my eyes. Anesthesia, it is true, had been in daily use for 25 years, and this boon had robbed surgical procedures of the greatest of their terrors; but the danger of infection was always present, and many well designed and skillfully executed operations failed on this account. The science of bacteriology scarcely had been born and the causation of zymotic diseases was still enshrouded in mystery. The epoch making discoveries of Pasteur in regard to fermentation and putrefaction, and the application of these discoveries in a crude form to practical surgery by Lister were still neither generally known nor widely accepted. Under these circumstances surgery was confined mostly to the repair of injuries, to the removal of external tumors, to ligation of the more superficial vessels for aneurism or injury and to operations for strangulated hernia. Abdominal surgery, as we understand it, was in its swaddling clothes; and was confined almost entirely to the removal of ovarian tumors, with very uncertain results.

The appendix remained unmolested in its lair. Gallstones had been removed by Bobbs, of Indianapolis, in 1867, but his example had not been followed by many physicians; and the stomach, liver, spleen and pancreas were practically immune to surgical attack. The kidneys were sacred organs and were considered beyond the pale of operative intervention. Operations on the intestinal tract were but seldom undertaken and usually terminated disastrously. Nor were the cranial or thoracic cavities more favorably circumstanced. Dieulafoy's aspirator had recently come into use and efforts to cure empyema were being made through this means, but the chest was seldom opened to allow the escape of pus or for any other surgical intervention. The cranium was trephined for depressed fractures and occasionally for epilepsy, and this was about the limit of the surgery of the skull and its contents. The thyroid gland had been excised a few times, with a high mortality, but even such a distinguished and progressive surgeon as Samuel D. Gross, vehemently condemned the operation as unwarrantable in 1866 and John Eric Erickson in 1873, also, disclaimed it as unjustifiable. The mammary gland was ablated for malignant growths, but the axilla was not cleaned out, nor were the pectoral muscles and fasciae removed. Under these circumstances a radical cure of cancer of the breast was well nigh impossible. Even the uterus was allowed to keep its tumors in peace, and only the cancers of the cervix received surgical attention. But it must not be supposed that surgery was at a low ebb. There were many surgeons of great attainments and of remarkable skill, and much successful surgical work was done. Many operations that are now done in safety were at that time prohibited on account of the danger of hemorrhage. The prevention of both primary and secondary hemorrhage was very uncertain, and operations of great magnitude would be undertaken with only a few bull-dog forceps to catch the spirting vessels. Artery clamps such as are used at present had not been invented and hemostasis was very imperfectly accomplished. Arteries were tied with silk and one end of the ligature was cut close to the knot, while the other long end was left protruding from the wound. These unsterilized ligatures could only be detached by ulcerating through the vessel and it not infrequently happened that about the 10th day a secondary hemorrhage would occur, which often resulted fatally.

As has been stated, however, the greatest obstacle to advanced surgical work was infection. Most wound healing was attended with suppuration, and the formation of a thick creamy pus was hailed as a favorable token, and was spoken of as "laudable pus." Erysipelas also was not uncommon, and was a menance not only to the success of the operative procedure but to the life of the patient as well; while septicemia, pyemia and other grave forms of systemic infection were by no means infrequent. Diagnoses were chiefly arrived at by means of the special senses, as instruments of precision were but few. The clinical thermometer was in daily use and the microscope was available for the examination of urine and other secretions, as well as for the examination of morbid tissues, but unfortunately there were but few who could use it. The esophagoscope, bronchoscope and cystoscope were not yet invented, nor were the X-rays and their wonderful properties discovered until about a score of years later.

The causation of diseases was equally unknown; and it was a decade later that Koch announced the discovery of the tubercle bacillus; and that Laveran and others showed that malaria was due to a parasite in the blood. With the development of the science of bacteriology the secrets of the ages began to yield to the researches of the investigators, and disease was found to be due to microorganisms rather than to some inscrutable act of divine Providence. With the recognition of the part played by germs in wound infection came the attempt to prevent infection by destroying the germs both before and after their lodgement in the wounds, and this was the era of the carbolic spray and the irrigation of wounds with strongly carbolized solutions. While the results were much improved by this means, which was known as antiseptic surgery, it was found that many serious disasters followed the use of carbolic acid on raw surfaces. Irrigations of wounds with corrosive sublimate solutions did not give much better results, and gradually the use of strong chemical agents in wounds was discontinued. The era of aseptic surgery was now ushered in, which has continued to the present time. By aseptic methods we mean the sterilization of everything that will come in contact with wounded surfaces before such wounds have been made, rather than the attempt to kill germs in wounds after they have gained entrance thereto. In 1873 the surgical world was thrilled by the announcement of the successful extirpation of the larynx by Billroth, and again in 1881 when the same brilliant surgeon successfully resected the pylorus. In 1881, also, the illustrious J. Marion Sims, leaving his special field of gynecology, devoted the last days of his life to advocating the operative treatment of penetrating wounds of the abdomen. In 1884 William T. Bull opened the abdomen for gunshot wounds of the intestines successfully and thus established practically Sims' theoretical opinion in regard to the treatment of these hitherto fatal injuries. It is not so well remembered however, that our own fellow, R. A. Kinloch, operated successfully for gunshot of the intestines in 1862. Lawson Tait at or about this same time was operating successfully for pus tubes and for other intra-abdominal conditions, which up to then had neither been accurately recognized nor successfully treated. In 1886 Reginald H. Fitz published his observations on inflammations in the right iliac region of the abdomen. This opened the way for the development of the surgery of the appendix, which has been followed with such brilliant results. This brings us to the time of the organization of this association. Let us pause for a moment to consider the state of medical affairs in the South soon after the close of the Civil War. The South was absolutely impoverished and many of its ablest physicians and surgeons migrated to the cities of the North, where they soon achieved reputation and prosperity; but many others remained in their native land, where they ministered to their people without much thought of any substantial reward. They had neither the time nor the money to permit them to attend medical conventions in remote places. The American Medical Association was the only national society at that time, and its meetings were quite small; but as soon as the disturbed condition of the country became more settled other national societies began to spring up. Thus the American Gynecological Association was organized in 1876, and the American Surgical Association, the last work of the revered Gross, was founded in 1880. The honors of this association were quite impartially distributed, however, as in the first ten years of its existence four surgeons from the South occupied the presidential chair—William T. Briggs of Nashville, Hunter McGuire of Richmond, David W. Yandell of Louisville, and Claudius H. Mastin of Mobile. But the leaders of surgical thought in the Southern States did not think that this association afforded a sufficiently broad field for the needs of the Southern surgeons, and hence the Southern Surgical and Gynecological Association was founded on October 12, 1887. Article II of the constitution adopted in 1888 says: "The object of this association shall be to organize the profession of the South in the most efficient manner possible for the advancement of the sciences of surgery and gynecology"; and President William D. Haggard, the father of our distinguished fellow and ex-president William D. Haggard, Jr., in his inaugural address said: "The Southern Surgical and Gynecological Association did not spring voluntarily into existence, but was the outgrowth of necessity and is the embodiment of unknown power."

From these quotations we see that the original reason for the organization of this association was the imperative need of the physicians and surgeons of the South for instruction in surgical science and for association with the leaders of surgical thought. The expression of the first president that the association is "the embodiment of unknown power" comes down to us as a prophecy, of which we now see the fulfillment. We now know that the effect of the action of the founders of this society has been to develop as able a body of surgeons as can be found anywhere in this country or abroad, and to greatly stimulate the science of surgery throughout this country.

The second president of this association was Hunter McGuire, beloved and revered in the South and honored throughout the whole country, whose distinguished son, Stuart McGuire, has also followed in the footsteps of his father and has served acceptably as president of this body. Dr. Hunter McGuire in his presidential address in 1889 said, "Let our motto be lofty aim and united action. As Southern men let us show the world that, under changed conditions, we have still the stamina of our forefathers. As members of our beloved profession, let us strive to be first in scientific attainment, first in integrity, first in high purpose for the good of mankind." This was a high standard to be set as the object of an organization which was in its infancy and which, at that time, was limited in its membership to surgeons of the former Confederate States. But has not the inspiration been attained? I think it has to a very large degree. The aim of this association has always been lofty and its scientific work has been such as to stimulate not only the surgeons of the South, but those of the other sections of our country as well, to exert their best efforts for the good of mankind.

The first annual meeting was held in Birmingham, Alabama, on December 4, 5 and 6, 1888, at which there were 41 members in attendance and 50 guests. The members were all from the 12 Southern States, including Kentucky. Of these Drs. J. D. S. Davis, John W. Long, L. S. McMurtry, F. W. Parham, Isaac S. Stone, H. M. Taylor and W. F. Westmoreland, Jr. remain with us today as honored fellows of this association.

Papers were presented by Dr. Westmoreland, Jr., on "Treatment of Fractures with Plaster of Paris Splints"; by Dr. J. D. S.

Davis, on "Electrolysis in Morbid Alterations Produced in the Prostate by Gonorrhoea of the Urethra"; by Dr. J. Wesley Long on "Practical Aseptic Surgery," and by Dr. Isaac S. Stone on "The Field and Limitation of Laparotomy," all of them valuable contributions to very live problems.

The Southern Surgical and Gynecological Association, however, could not long remain a strictly local society, and soon we find surgeons from other parts of the Union seeking its membership, until for a long time past it has been a national society in everything but name. It is true that the bulk of its membership comes from the South in accordance with the constitution, Article II of which, as amended in 1890, reads "The object of this association is to further the study and the practice of surgery and gynecology among the profession of the Southern States"; but what an array of illustrious names of former and present fellows from every section of our country are inscribed upon its roster.

From Portland, Maine, to Portland, Oregon; from Boston to Galveston; from Minneapolis to New Orleans; from Chicago to Jacksonville; from New York to San Francisco, and from Atlantic City to Los Angeles, surgeons whom we delight to honor have honored us, and honored themselves, by seeking fellowship with us.

Among so many distinguished Fellows now with us it would be an ungracious act to name any single individual as deserving of especial praise, but this does not hold good for those who, having wrought mightly in their day, now rest from their labors. In the early days of the association, when it was doubtful whether it would live or die, the great influence of our second president, Dr. Hunter McGuire of Richmond Va., was a strong factor in placing it on a solid foundation and in giving it the scientific standing which has continually increased to the present day, The prosperity of the association was also much enhanced by the work of Dr. W. E. B. Davis of Birmingham, Ala., who was its secretary from its organization in 1887 until 1900, and its president in 1902. In fact, we have been highly fortunate in our secretaries, having had but three in the thirty-four years of the existence of the society. Among other notable fellows who greatly added to the reputation of the Association may be mentioned Richard Douglas of Nashville, John B. Murphy of Chicago, Joseph Price of Philadelphia, Louis McLane Tiffany of Baltimore, Maurice Richardson of Boston, Roswell Park of Buffalo, Joseph Ransohoff of Cincinnati and George Ben Johnston of Richmond, all of whom have now passed to the great majority. We honor them for their accomplishments and we miss them at our annual gatherings. In looking through the Transactions I have been greatly impressed with the great variety of subjects presented by the authors and the full and valuable discussions thereon. A veritable epitome of the progress of surgery is to be found in these yearly publications.

Moreover, the initial purpose of the Association has been fulfilled. The surgeons of the South no longer require any special tutelage in surgery or gynecology, but are the peers of their colleagues the world over. They are the legitimate successors of those wonderful pioneers of the past, Ephraim McDowell, the father of ovariotomy; Crawford W. Long, the first to use ether as an anesthetic, and J. Marion Sims, the father of modern gynecology; besides a host of others whose achievements, while not so outstanding, have added much to the relief of suffering and the prolongation of human life. They were, however, more skilled with the scalpel than with the pen, and their deeds were slow in getting into print and in securing for their authors that recognition to which they were entitled.

Our infant association has now developed into full maturity and has acquired adult strength. Its object is no longer limited to the development of the study and practice of surgery in the South, but extends to all parts of our country. It is a national society. In what way can its influence and usefulness be increased? First, by exercising great care in the election of fellows. Dr. Bedford Brown, in his presidential address in 1893, said the membership included three classes of physicians:

1. Specialists in surgery and gynecology.
2. Eminent practitioners who did some surgery and gynecology.
3. Young surgeons of promise who had not yet reached prominence.

While this classification may have been necessary in the early days of the Association, it is now neither necessary nor proper, and, in fact, is no longer observed. In my opinion the fellowship should consist of specialists in surgery, including gynecology, who have obtained prominence in their profession by their work and by their contributions to surgical literature. There are many excellent surgeons who operate successfully but who neither write nor discuss surgical papers. Such individuals are not entitled to become fellows of this Association. Second, this Association is not a kindergarten for the development of fledglings in surgery, who have not yet acquired full adult plumage, however promising they may be; and, in my opinion, a period of 8 or 10 years should have elapsed from the time of graduation before they should be eligible for election to fellowship in this society. Third, fellows who do not attend the meetings and present papers at least once in three years are mere parasites and should be dropped, unless some reasonable excuse is given for their delinquency.

It is a great honor to be a fellow of this Association, but with this honor goes a responsibility; first, to live up to the highest ideals of professional rectitude, and secondly, to contribute to the general stock of surgical knowledge. Have we done this? In the main I think we have. We have a large number of very active members who are usually found present at our meetings and who contribute largely to our programe; but there are also quite a number of names on our roll of men who have absented themselves for protracted periods and who have not contributed anything to the interest or advantage of the fellows of the Association. Such persons are barnacles on our craft that ought to be removed. As we have many more applications for fellowship than can be elected, the question of increasing the number of active fellows naturally comes up for consideration. I think it would be a mistake to do this, as a larger number would be too bulky for a society of specialists, and would tend to lessen the distinction of fellowship in this Association. Let our membership then consist of those who by their work have shown that they are entitled to this honor, and who value their membership sufficiently to attend the meetings regularly and to contribute to our scientific proceedings.

Many years ago a prominent author, I think it was Ericksen, said surgery had reached its peak; that there would be some refinement in technique, but surgery could not advance farther. Since that time surgery has been revolutionized and the brain and spinal cord, the heart and lungs, the abdominal and pelvic organs, the thyroid and prostate glands, and the aorta and great vessels, have all been made accessible to successful surgical attack, while plastic and reparative surgery have reached a degree of perfection not dreamed of by our forebears in their wildest flights of imagination. In this advance of surgical science and art fellows of this Association have played an important part, and we have to pay our homage to those who are dead, and to offer our congratulations to those who are still living and striving in the interest of their fellow-men. But what of the future? Has the limit of surgery been reached? Nay! I verily believe we are but on the threshold of discoveries that will add greatly to the life and happiness of the human race in the prevention and cure of conditions which are now both unpreventable and incurable. The note that I would wish to sound is one of abounding optimism and of unbounded faith in the victorious march of our guild to heights that have never yet been scaled or even envisaged through the mists of the ages. In this advance it is both my ardent hope and my earnest expectation that the Southern Surgical Association shall take a leading part.

"Men, my brothers, men, the workers, ever reaping something
new.
That which they have done but earnest of the things that they
shall do."

EDITORIAL.

"Greater love hath no man shown than this,
that a man lay down his life for his friends."

Lest we forget, this is a slight reminder that the Burt J. Asper Memorial Fund is still open. Since the last announcement additional contributions have been received as follows:

Dr. J. J. Greengrass, class of 1911, Patterson, N. J. . .	$15.00
Dr. A. M. Shipley, class of 1902, Baltimore, Md.	10.00
Dr. J. R. Agnew, class of 1914, Chicopee, Mass.	10.00
Dr. Kenneth B. Jones, class of 1911, Univ. Hosp., Balto.	5.00
Dr. R. A. Allgood, class of 1912, Fayettesville, N. C. . .	5.00
	$45.00
Previously acknowledged	60.00
Total	$105.00

The appended letter shows the right spirit:

October 19, 1922.

Dear Doctor Winslow:

I have just been reading the "Bulletin" and wish to make a small contribution to the Burt J. Asper Memorial Fund. I am enclosing a check for $10.00 and sincerely trust that a sufficient amount may be realized to establish a scholarship.

J. R. Agnew,
Class of 1914.

This gift, coming as it did unsolicited, is more than appreciated. If only a small proportion of our alumni would do likewise, Dr. Agnew's wish would be more than realized. Brother alumni, this is to be a free-will offering; any other course would be unworthy the memory of Burt J. Asper. Let not his death be in vain, but perpetuate it with a memorial which will serve to inspire the youths of the future. This is your opportunity. Are you going to grasp it?

PAUSE AND GIVE HEED.

According to the latest figures available, the roll call of the Medical Alumni Association is now well over the 1,200 mark. This is fine, but we will not be satisfied until every alumnus eligible to membership shall have signed up. If an application blank has failed to reach you a request for one to Dr. W. S. Love, 836 West North Avenue, Baltimore, will be attended to without delay. The task of re-creating the Alumni Association, as the above figures attest, is well under way; the job, however, is a big one, and its successful issue depends upon your co-operation. Join up now, not tomorrow, lest you forget. The Association is yours to mold as you wish. As ye want it, so shall it be—inert or active; it's up to you. If you have neglected to answer the questionaire sent you, please don't delay longer. We want this information for our records; we want it correct and not garbled. Do it now.

DEATHS.

Dr. Walter Fremont Church, Greeley, Colorado, P. & S., class of 1893; and Rush Medical College, class of 1899, a captain in the Medical Corps during the World War, died September 11, 1922, aged 57, from heart disease.

Dr. Arthur A. Reynolds, Scranton, Pennsylvania, B. M. C., class of 1900, died August 15, 1922, aged 46, from gastric ulcer.

Dr. Levi Allen Neiman, Brooklyn, N. Y., B. M. C., class of 1897, died August 25, 1922, aged 60, from streptococcic septicemia and endocarditis.

Dr. Thomas Fleming Lanham, Grafton, W. Va., P. & S., class of 1880, died August 25, 1922, aged 72.

Dr. George Lee Bowne Jarvis, Coopertown, N. Y., P. & S., class of 1892, died September 23, 1922, aged 53, from an accidental gunshot wound of the abdomen. In 1916 Dr. Jarvis entered the United States Naval Reserve, and on America's entrance in the World War was made assistant surgeon with the rank of lieutenant, junior grade. During the war he was promoted to a senior lieutenancy, under which rank he was retired at the close of hostilities.

Dr. William W. Requardt, Baltimore, Md., class of 1896, Associate Professor of Surgery in the University of Maryland, died

October 9, 1922, aged 48, from septicemia, a metastasis from the throat.

Dr. John W. Cox, Johnson City, Tenn., P. & S., class of 1884, a veteran of the Spanish-American War, died October 3, 1922, aged 64, following an attack of acute indigestion.

Dr. Charles O. Rice, Denver, Colorado, B. M. C., class of 1890, died October 2, 1922, aged 64, from carcinoma.

Dr. Addison B. G. Reader, Camden, N. J., B. M. C., class of 1898, died October 18, 1922, aged 46, from heart disease.

BOOK REVIEW.

A Manual of Pharmacology. By Torald Sollmann, M. D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Second edition, entirely reset. Octavo of 1066 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $7.00 net.

Pharmacology, like all other branches of medicine, has made rapid strides during the past few years. Many new drugs have been added to the physician's armamentarium, and some have been dropped as obsolete. Those who desire to obtain first-hand authorative information concerning these changes need only consult Sollmann's Manual of Pharmacology. It is written both with a view to the needs of the physician and the student becoming initiated into the mysteries of drugs. For the former a more detailed account of the point under discussion is added in small type; for the latter, who is concerned merely with an acquisition of the basic principles, the matter is set forth in bolder type. The new drugs and remedies are emphasized with definite instructions for their use. To the drugs in general use most attention is given. A section is devoted to prescription writing, a phase of medicine which has become to a great extent a lost art. By adhering to the injunction therein set forth the student will soon acquire the art of correct prescription writing. In the appendix is incorporated besides other valuable material a table of average doses and a full bibliography of the latest works on pharmacology. It is needless to state that this edition is a thoroughly trustworthy guide to the proper understanding of and direction for the intelligent use of both organic and inorganic drugs. It gives us great pleasure to recommend it to student and active practitioners of medicine.

Bronchoscopy and Esophagoscopy. A Manual of Peroral Endoscopy and Laryngeal Surgery. By Chevalier Jackson, M. D., Professor of Bronchoscopy Esophagoscopy, Graduate School of Medicine, University of Pennsylvania; Professor of Laryngology, Jefferson Medical College. Octavo of 346 pages, with 114 illustrations and 4 color plates. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $45.50 net.

There is hardly any need of calling attention to a work from the pen of Chevalier Jackson, as the quality of his literary contributions have been for a number of years recognized as of the highest order of merit. For a long time Jackson has been acknowledged the master bronchoscopician and esophagoscopician. He is without peer in this line, and his teachings are devoured with avidity. No man in this wide world has done so much to place bronchoscopogeal and esophagoscopogeal diagnosis and treatment upon the high plane of perfection it has attained as this indefatigable worker and scientist. His teachings are accepted as the last word, and justly so. He has made the direct viewing and treating of the esophagus and bronchial tree a simple measure to those who have taken the trouble to profit of his teachings. He has made it possible to remove from these structures foreign bodies with the least degree of danger to the patient, and this under the direct vision and control of the operator, so that today it is inexcusable to open the chest or neck to recover objects accidentally aspirated into these tracts. However, it must not be surmised that the insertion of either the esophageal or bronchial canula is without danger, for pitfalls are ever lurking for the unwary and uninitiated. It is with these problems that this monograph is concerned. It is invaluable to the specialist in this field, encompassing as it does the years of experimental work and practical application thereof by Jackson to the direct viewing of the food and air passages. It tells what can and what cannot be expected of this instrument of precision; how and how not to use it. The author is of the opinion that any foreign body of appreciable size that has gone down through the natural passages can be removed bronchoscopically the same way, provided fatal trauma is avoided. At his clinic 98.7% of foreign bodies have been thus removed. Specialists cannot afford to be without it; others can read it with much profit.

Physical Diagnosis. By W. D. Rose, M. D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas; Visiting Physician Little Rock City Hospital, Baptist Hospital and St. Vincent's Infirmary, Little Rock, Arkansas. Third edition. Three hundred and nineteen illustrations. St. Louis: C. V. Mosby Company, 1922. Cloth, $8.50 net.

This book presents most excellently those features of physical diagnosis needed by the student in grasping the science of making a diagnosis. It is well illustrated; the diction is clear and forceful and the matter is well ordered and leads up gradually from the simpler to the more complex without jarring the sensibilities of the reader. An attractive feature of the book is the brief section devoted to the clinical pathology of the lesion under discussion. This tends to simplify the subject and to prepare the ground for a better understanding of the matter under discussion. The book is thoroughly modern in tone and contains the last word on the proper way of going about making a proper examination of the organs of the chest and abdomen. Both students and general practitioners of medicine will find it an invaluable aid in mastering the detection of abnormal processes going on within the chest and abdomen. The present edition should prove as popular as its two immediate predecessors. It gives us much pleasure to place our stamp of approval upon it and to recommend it most highly to the kindest consideration of our readers.

Physiology and Biochemistry in Modern Medicine. By J. J. R. Macleod, M. B., Professor of Physiology in the University of Toronto, Toronto, Canada; formerly Professor of Physiology in the Western Reserve University, Cleveland, Ohio. Assisted by Roy G. Pearce, A. C. Redfield and N. B. Taylor. Fourth edition. With 243 illustrations, including 9 plates in colors. St. Louis: C. V. Mosby Company, 1922. Cloth, $11.00 net.

Just as there are anatomical changes in disease, so are there physiological perversions. Not until recent years has this aspect of medicine been realized, and only within the past decade has it been emphasized at all. This field of medicine offers unlimited chances for investigation and interpretation, and will in days to come form a goodly portion of the practice of medicine. Macleod in the above mentioned book has laid the groundwork for a proper appreciation of this phase of medicine. The book is a pathological physiology so written as to indicate the application of the methods of the physiological laboratory toward the interpretation of disease. It stands in the middle ground between textbooks on pure physiology and those on functional pathology. It is not a substitute for either, but a supplement to each, and as such has an immense field of usefulness.

Lectures on Dietetics. By Max Einhorn, M. D., Emeritus Professor of Medicine at the New York Post Graduate School and Hospital; Visiting Physician to the Lennox Hill Hospital, New York. 12mo. of 244 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $2.25 net.

More and more is the profession coming to the point of view that diet has an important place in medicine both in the preservation of health and in the restoral of the diseased to a healthy condition. The course of many diseases can be changed for the better by a proper dietary, and many a normal individual has been made sick by the improper use of food. Einhorn's clinical talks considers both of these phases of diet and should contribute materially to a more thorough understanding of the underlying factors governing a sensible dietary. It considers the principles of diet and nutrition; the digestibility of foods and the diet in health and acute diseases; the diet in chronic diseases; the care of digestion; the care of digestion of soldiers; the dietetic treatment of chronic diarrhoeas; the Allen treatment of diabetes mellitus; the diet in operative cases and a host of other conditions. It is a small monograph, but full of helpful hints and directions and especially adapted to the needs of the practitioner seeking first-hand knowledge concerning how to feed this or that person in health and disease.

The Elements of Scientific Psychology. By Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University, Baltimore; author of "Mysticism, Freudianism and Scientific Psychology," "Personal Beauty and Racial Betterment," etc. Illustrated. St. Louis: C. V. Mosby Company, 1922. Cloth, $3.50 net.

This book is written with the view to introducing the student to the elements of psychology and for the purpose of giving him a proper foundation for a genuine understanding of the more intricate problems of the science of the mind. It therefore deals with general problems of pyschology only, leaving the special topics to books devoted to the more highly developed aspects of the subject. It just touches the high spots. Not until these are thoroughly mastered is the student prepared to avail himself of the more technical side of the subject.

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SOME PHASES OF DIABETES MELLITUS

By HARRY M. STEIN, M. D., BALTIMORE

Read before the Clinical Club of Baltimore, December 9, 1922

"The nature of the disease then is chronic and it takes a long period to form; but the patient is shortlived, if the constitution of the disease be completely established; for the melting is rapid; the death speedy. Moreover, life is disgusting and painful; thirst unquenchable; excessive drinking which, however, is disproportionate to the larger quantity of urine, for more urine is passed; and one cannot stop them either from drinking or making water. Or if for a time they abstain from drinking their mouths become parched and their bodies dry; the viscera seem as if scorched up; they are affected with nausea, restlessness and a burning thirst; and at no distant term they expire."

This was written (200 to 300 A. D.) by Aretaeus, a Cappadocian. Whether this is the first clinical description of diabetes mellitus or not, it certainly is a clear picture and serves to show us that the condition has been recognized for a long time. That its interest is increasing is best testified to by the enormous literature which has arisen, especially since 1914. That its clinical recognition and study are important is shown by the figures of Joslin, which indicate a mortality increase from this disease of 80 per cent. between 1900 and 1915 (in the United States), whereas there was a decrease of 24 per cent. in deaths from all causes.

It has been my good fortune to see during the past eighteen (18) months twenty-eight (28) cases of diabetes, and it is my purpose tonight, after briefly referring to this group, to select from it cases illustrative of certain interesting phases of this condition. Three of these patients were seen but once, and these were young men who were completely ignorant of the presence of any organic disease. Twenty-five (25) patients I have been able to follow closely for varying lengths of time. Twenty-two (22) patients were at one time or another treated in the hospital, and these received training along the lines of dietetics, personal care and hygiene, examinations of urine, etc. The knowledge acquired by some of them is quite remarkable and I cannot refrain from emphasizing here the importance of having all diabetics, whenever possible, educated in the things needful for their favorable progress.

Ten (10) patients were male and fifteen (15) females. There was one negro (female), six Hebrews and one child in the series. Only one patient had lues, as expressed by a positive blood Wassermann, and with this one exception none of them had any clinical evidences of syphilis that could be detected. The age of the youngest patient was three years and that of the oldest sixty-two (62) years. Thirteen (13) were fifty (50) years of age or more, and six (6) cases were thirty (30) or under, the average age incidence being forty-eight (48) years. Of the total number glycosuria was discovered at the time of the first visit in ten cases.

There was one case occurring with pregnancy, this in a Jewess twenty-two years old, who, although failing to adhere strictly to her diet, went to term and was delivered of a healthy child. Her subsequent recovery was uneventful. The patient three years old referred to above has been sugar free for one year, maintains a plasma sugar within normal limits and is apparently doing well.

History of trauma preceding the diabetes occurred in one case. This patient was a white man, who was sixty-one years old when he first came under observation, glycosuria having been discovered seven months previously. As a result of an accident in 1915, he suffered a depressed fracture of the skull, for which a craniotomy was done, there being no sugar present in the urine at that time.

Symptoms such as polydypsia, polyuria and neuritic pains in the extremities did not present themselves until six years after injury.

The question of trauma preceding diabetes has always been the subject of much discussion and the existence of a transitory glycosuria following trauma cannot be denied, but I do not see how in itself it can produce a true diabetes. Surely, when one considers the physiology and pathology of diabetes, he must conceive that injury as an actual cause of the condition is to say the least very doubtful. It is generally agreed that glycosuria follows injury to the head more often than elsewhere, and in a series of cases studied by Brouardel seventeen out of thirty-three were of this nature. The glycosuria usually appears soon after the injury, and if it occur as long as two years or more later, it can be looked upon as having no connection.

Investigation along this line was made by a number of observers during the World War, inasmuch as a wealth of material was available for study, but no evidence of any moment was obtained to support the view that trauma was in itself ever capable of producing diabetes.

On Overweight in Relation to Diabetes

It is a well established fact that in the presence of other wasting diseases, diabetes is almost unknown, and the connection between diabetes and obesity seems to be rather definitely established. Joslin once said that diabetes was a penalty for obesity, and in a recent article by him he makes mention of a very interesting bit of information gathered from insurance statistics. It is to the effect that the frequency of constitutional diseases increases as age advances and particularly as obesity advances but that diabetes is to this extent different inasmuch as its incidence increases with age only with persons who are fat, while in those who are thin it remains constant throughout life. Again, Kisch (A. M. A. Journal, March, 1915) has called attention to the frequency with which diabetes develops in the later lives of fat children. It has been shown in insurance statistics that after the age of thirty an individual increases his chances for life by being moderately underweight, and it is well to impress this fact upon all patients.

Romanelli (Journal A. M. A., 1915) reports rejection of 308 insurance applicants because of obesity, and of this number twenty-one per cent. had glycosuria.

The condition of obesity is frequently associated with other factors in the problem of diabetes. Thus we all know how often obesity is linked hand in hand with over-eating, inadequate amount of exercise, poor musculature and body frame-work. It must finally be acknowledged that overweight occurs so frequently with this condition that it is impossible to disregard the relationship between the two.

In only four cases of this group was there a family history of overweight, but in sixteen of them there was definite overweight either at the time of the first interview or at some time previous. Several of them are worth mentioning in greater detail.

CASE No. 5. Age 31. Had been fat since childhood. Weight 200 pounds. Ideal weight 130 pounds. She eats a great deal, especially sweets, and has been steadily gaining weight for the past five years. There has been abnormal thirst and polyuria for one year. She developed a gall bladder attack, and after admission to the hospital it was discovered that sugar was present in the urine. A drainage of the gall bladder was done and she made a good recovery.

CASE No. 10. First seen at the age of 44. Two years previously he weighed 265 pounds, which was 79 pounds over his ideal weight. Had lost 50 pounds four months before admission to the hospital. He had a large appetite, with an unquenchable thirst, and when first seen had a large sloughing carbuncle of the neck.

CASE No. 12. A white man, age 24, who acknowledged sedentary habits, ate large quantities of food with much candy. He has always been fat, but knows that his weight is steadily increasing. There is a history of repeated attacks of tonsillitis occurring during the past three years. Glycosuria was discovered at the time of his first visit. His best weight, which is his present one, is 320 pounds. He should weigh 150 pounds. He never feels well and says that he is "in his own way." Was first seen in February, 1922, and at the end of eight months' treatment he had lost 141 pounds. He feels better now than ever before in his life, and when seen by me at a very recent date it was almost impossible to associate his physical appearance with that of the heavy, cumbersome man of a few months previous.

CASE No. 18. Weighed 340 pounds five years previous to the time diabetes was discovered and he was then 163 pounds over weight. At his first visit he still weighed 23 pounds more than he should.

These cases are cited because they represent the more unusual ones, but it is to be remembered that 64 per cent. of the total number were overweight. Despite the fact that this analysis is made from a small group of cases, it certainly bears out the knowledge of the definite relation between fat and diabetes.

RELATIONSHIP OF HEREDITY TO DIABETES

The question of heredity is a vital one, especially from the standpoint of prophylaxis and early diagnosis. Heredity is looked upon by some as being a favorable omen, but one must not lose sight of the fact that the onset of the disease is apt to be earlier in successive generations and, therefore, of the more severe type. Recognizing the fact that diabetes may be unfavorably influenced by heredity, the examination of blood relatives of known diabetics is to be encouraged whenever possible. The investigation of the carbohydrate tolerance of this group of individuals has shown us that it is abnormal in many instances, and a latent diabetes will often be discovered by this method, where otherwise it would go on undetected for an indefinite length of time. It seems to me, therefore, that we should make every effort to have the children of our diabetic patients examined carefully along the lines mentioned before. In dealing with this disease many of us are acquainted with the frequency in which a positive family history is met with, and although this group of patients is too small to warrant the drawing of any conclusions regarding familial influence, there are several cases which are deserving of mention. In four of the total number there was a history of diabetes in the families.

CASE No. 15. White female, age 57. Her father died of heart disease at the age of 75, but suffered from diabetes for several years previous to his death.

CASE No. 17. White female, age 54 years. Had a sister who died in diabetic coma at the age of 28.

CASE No. 22. White female, age 57 years. Father and mother both died of senility at ages over 75. She has two sisters living and well. One sister is living and has diabetes, and there is one brother living, age 51, who has a mild diabetes. This brother has a son with diabetes. Her grandfather on her father's side died of diabetes, as did also her great-grandfather on father's side.

SURGERY AND DIABETES

Under this heading we must keep in mind that certain complications of diabetes of themselves require surgical procedures and likewise that the diabetic patient is not exempt from any of the many surgical diseases. It certainly follows then that diabetics need more surgery than the average individual. The mortality in the past amongst this class of patients has been frightfully high, most of this being due to unwise management. Barring cases of recognized surgical emergencies, the pre-operative care as well as the choice of both time and anesthetic should rest entirely with the internist or at least be subject to his recommendation. Operations should be deferred whenever possible and vigorous treatment of the diabetes be instituted. The probable benefits to be derived from this obviously simple truth can be noted in the tendency that many apparently serious surgical conditions have to clear up when the diabetes is properly handled. We must not lose sight of the not infrequent occurrence of coma following operations upon untreated cases. Thus two cases in this series were seen in coma following operation, one after the removal of an ovarian cyst and the other after incision and drainage of an extensive cellulitis.

The success or failure practically always depends upon preliminary treatment. These patients should be made sugar and acid free, and hyperglycemia reduced; regulation of the bowels must never be overlooked; their highest tolerance should be attained and for twenty-four hours preceding operation they should be given generous quantities of fluids. All of these things are extremely important, and especially so for those patients who are to receive a general anesthetic. If this plan be faithfully followed these people invariably do well and, except in instances where some unforeseen accident occurs, a favorable outcome can be expected. It would seem almost unnecessary to mention the above facts, but it is really surprising how many times their importance is overlooked. The consideration of the type of anesthetic depends largely on the nature of the surgical condition. Whenever possible local anesthetics should be used, and spinal anesthesia has often been employed with reports of excellent results. Next of choice is nitrous oxide and oxygen and the last is ether, or better still a combination of gas, oxygen and ether. Chloroform should be used under no circumstance. If taking a general anesthetic, the patient should be anesthetized before going to the operating pavillion, in order to avoid needless apprehension and excitement. The period of anesthesia should always be as short as possible and careful, gentle handling of the tissues is highly desirable.

From time to time one sees patients who are given general anesthetics in the presence of glycosuria and who apparently do well. This may be because of the fact that the diabetes is a mild one, or because of the pre-operative withholding of food in the presence of pain and vomiting, which latter procedure is really a beneficial one from the standpoint of the diabetes.

Twelve of my patients had conditions requiring surgical interference either of a major or minor nature. As mentioned before, two of these were seen after operation and in coma. Seven of the others were given general anesthetics and of these five were known to have glycosuria, sugar being discovered in the urine of the other two after operation. In four patients there was a history of gallbladder disease preceding the discovery of the diabetes, and in two of them definite pancreatitis was demonstrated at the time of operation.

The following is a table showing the existing surgical conditions:

(1) Complete prolapsus uteri with urgent and distressing pressure symptoms.
(2) Acute cholecystitis.
(3) Glaucoma.

(4) (2 cases) Hypertrophied tonsils with history of recurrent attacks of tonsillitis.
(5) Ovarian cyst.
(6) (2 cases) Carbuncle of the neck.
(7) Chronic osteomyelitis of bones of foot.
(8) Acute cholecystitis with pancreatitis.
(9) Cellulitis of foot and leg.
(10) Diabetic ulcer of the toe.

Only four of these conditions could be considered as definite diabetic complications, the remainder occurring as incidental surgical diseases. Several cases are of some interest.

CASE No. 3. White female, age 57. Duration of diabetes 1½ years. Presented herself with complete prolapse of the uterus, (urgent pressure symptoms from this), polyuria and pruritus vulvae. Treatment for the diabetes had always been indifferent, and on admission to the hospital there was 6.4% glucose in the urine, with diacetic acid and acetone present. She responded well to three weeks of preliminary treatment, was operated upon under general anesthesia followed by an uneventful recovery.

CASE No. 12. A white male, age 24. Was 170 pounds overweight. History of recurrent attacks of tonsillitis. One-half of 1% glucose was present in the urine, but inconstantly so. Typical diabetic sugar curve. After preliminary treatment, the tonsils were removed under general anesthesia followed by an uneventful recovery. Patient still sugar free ten months later.

CASE No. 9. White male, age 60. Without previous history of diabetes (?), 20 pounds overweight. Had an acute gall-bladder attack accompanied by vomiting and restriction of food for several days previous to admission to hospital. The first examination of the urine showed it to be sugar free and the plasma sugar was 124 mgms. per 100 cc. A few days after operation 1% of sugar was discovered in the urine, and the plasma sugar at this time was 180 mgms. per 100 cc. Glycosuria was constantly present until controlled by a regulation of the diet. A number of specimens subsequently examined, after the patient had made a good recovery and was discharged from the hospital, were sugar free. His diet, although liberal, is restricted. It is interesting to speculate here, first, as to whether he had a mild diabetes in which hyperglycemia and glycosuria were reduced under the necessary restriction of diet, or secondly, whether he had a transitory glycosuria associated with acute disturbance of pancreatic function.

As far as the post-operative care is concerned there are two phases worthy of notice. The first is that these patients should be quickly returned to their maximal diet, and the second that wherever possible hypodermic injections and sub-pectoral salt administrations should be avoided because of the apparent vulnerability of their tissues and their proneness to local infections.

MORTALITY

Five of these patients died, all in coma. Two of them have been referred to previously, and two others refused to follow treatment. The last to be mentioned was a white female who had a diabetes of two months' duration when first seen, and despite a long course in the hospital, diligent and honest co-operation, she grew rapidly worse despite any dietetic arrangement that was tried. Death came four months after the beginning of treatment.

In two patients the presence of the soft eyeball was noted, this sign being rather significant, as it is supposed to occur only in coma of diabetic origin.

This paper has of necessity been fragmentary, but I cannot conclude without making a brief allusion to the most interesting of all diabetic complications, namely: Coma. It is a matter of great surprise that such a dramatic and common termination of diabetes received little or no notice until its recognition and description by Kussmaul in 1874. For example, Trousseau, the brilliant French clinician of the time just preceding this date, while recognizing such complications as gangrene of the extremities, and even of the lungs, states that as a general rule "Diabetic patients sink slowly, succumbing under the complication of tubercular pulmonary phthisis."

ECTOPIC PREGNANCY

Causes and Diagnosis, with Report of 85 Cases

By C. Fred Fisher, M. D.

Resident Gynecologist, University Hospital, Baltimore

By ectopic pregnancy is meant the development of the fertilized ovum outside the uterine cavity, in the horn of the uterus, in the fallopian tube or in the free abdominal cavity.

There are various causes given for this very interesting condition. F. P. Mall states after an examination of many specimens that this condition is associated quite definitely with inflammatory changes that must have preceded the lodgment of the ovum in the fallopian tube, and the causative organism in nearly all the cases is the gonococcus. This organism invades the tube, causing an inflammatory reaction, which in the course of repair causes adhesions of the fimbria in the tube, forming "false channels," into which the impregnated ovum falls and develops.

The normal tube is lined with ciliated epithelium which assists the ovum in its descent toward the uterine cavity and anything that delays the ovum in its course may be the cause of this condition. It has been stated that the infantile type of tube may be the cause where there have been no inflammatory changes, the many convolutions in the tube impeding the course of the ovum.

Sippel bases his theory on the transmigration of the ovum, where at operation the corpus luteum verum has been found in the opposite ovary, from the tube in which the pregnancy occurred; the ovum in its journey across the distance between that ovary and the tube involved has increased in size so much that it will not pass the uterine end of the tube, but it can also be assumed that the changes in the egg that represent the first changes toward nidation, due to the long journey of the ovum, might take place in the tube instead of in the uterus as they normally do.

Katz explains the cause in normal tubes as an aberration of some normal physiologic function of the corpus luteum. The normal function given by him of the corpus luteum is to cause in the tubes both at the time of pregnancy and menstruation an enormous increase in the cells that line the tube, and causes such a piling up of cells that the lumen of the tube is obstructed when the corpus luteum is abnormally stimulated.

The theory supported by Mall is the one most generally accepted today. Extrauterine pregnancy as a rule occurs in women who have had a period of relative sterility lasting several years, during which the tube by slow processes of repair has attempted to return as near to normal as possible, but the ovum descends in the "false channel formation period" before a continuous lumen might have established itself, which if it had been allowed to return more nearly to normal the ovum might have had free passage and a normal uterine pregnancy resulted. This might be made more clear by naming those cases in which a normal uterine pregnancy had occurred after one ectopic pregnancy and at operation only the affected tube was removed, the remaining tube having had a chance to establish a perfect lumen again.

It has also been stated that the development of an ovum in a tube showing chronic inflammatory changes will usually be successful, but if the infection be active or recent the ovum will rapidly die and disintegrate. But this last statement does not hold true in a recent case in this hospital where at operation a pus tube was found on one side and on the other an unruptured ectopic pregnancy containing a two months' foetus.

Von Winkel states that of all those that survive and develop only one-fifth remain normal, the remainder becoming monsters or are pathological.

Those that rupture into the abdominal cavity except in rare instances die. The rupture of the tube and deposit of the product of conception into the broad ligament favors further development.

It takes about six weeks for an ovum to increase in size sufficient to cause recognizable symptoms, and relatively common are those cases who, believing themselves to have a normal uterine pregnancy, and attempting to abort themselves, come into the hospital for the relief of the continued and prolonged bleeding, or alarming symptoms of infection, or from the cramp-like pelvic pains after they have passed what they have thought to be the normal secundines, but which was really a cast of the decidua, and when examined were found to have an ectopic pregnancy.

Werth states that probably only one per cent. reach maturity and most die in the first month. He also states that this condition is rare in rural communities, and most common in the cities, and runs parallel with the venereal statistics.

If the symptoms of a normal pregnancy do not bring the patient to a doctor this condition is usually not recognized until rupture or some other accident occurs.

The cause of tubal rupture in this condition has been explained in many ways, but has been stated by W. S. Gardner to be due to the stretching of the tube beyond its normal limit of elasticity, plus the weakening of the wall by the corrosive action of the chorionic villi. Acute tubal rupture might be due to the sudden hemorrhage in the tube due to the rupture of one of the vessels in the tube wall, the tube being stretched beyond its elasticity by the gradually increasing hemorrhage.

Shortly after rupture takes place uterine bleeding nearly always follows and not a hemorrhage from the tube, as is often thought. Sampson has shown by the injection of uteri that the bleeding is venous. This bleeding continues or a bloody sanguinous discharge takes its place until the affected tube is removed.

The uterine decidua may come away as a triangular cast or be cast out in shreds.

The accidents that may befall a tubal pregnancy may be stated as follows:

Tubal rupture—rupture of the tube wall with or without rupture of the amniotic sac.

Tubal abortion—rupture of the amniotic sac and not the tube wall.

The latter may or may not be serious as regards life and death, for the accident may not be associated with hemorrhage of any great moment; on the other hand there may be a slow and steady flow of blood from the fimbriated end of the tube. The former may give rise to very urgent symptoms and a tragic result if not given immediate treatment. Fatal cases are usually of this type.

The diagnosis is made at times before any accidents occur. A patient who may or may not have had a period of relative sterility seeks medical advice for what she thinks is a normal uterine pregnancy, and in the course of the routine pelvic examination is found to have a tender mass in one or the other of the adnexa regions, and perhaps a slight uterine enlargement, but uterine enlargement mentioned by many is not a constant clinical fact. If she give a history of pelvic inflammatory disease the diagnosis is difficult, but if it be doubtful, it is better to err on the safe side and institute proper surgical intervention, rather than let the patient go on with a doubt whether the condition be a pus tube or an ectopic pregnancy, subjecting her to a chance of an abdominal catastrophe. If it is an ectopic you have done the patient a great service and if it be a pus tube it may be removed with relative safety to the uterine pregnancy if one be present. A patient was sent to this hospital not long ago with what was thought to be acute salpingitis, but her menstrual period had gone over one week in time, after citing a normal menstrual history, the period to come on with pain in the lower abdomen, and bleeding from the vagina that continued long after her period should have ceased, with slight enlargement of the uterus, and a tender mass in the adnexa region. She was operated and a pus tube found on one side, and a large unruptured ectopic on the other.

The most typical and often the most tragic are the cases seen just after rupture has taken place.

The history in most cases is as follows: That a woman in good health passes her normal menstrual time without flow, paying more or less attention to it, believing herself to be normally pregnant, is taken suddenly with severe pain in either side of the abdomen and may faint. The pain remains in the pelvis and continues as a colicy discomfort, with tenderness in the same region. Soon after bleeding from the vagina begins. The bleeding is in small amount but persistent.

The fact that the bleeding is constant and pain severe brings the woman to her doctor for the relief of the symptoms of what she might term an abortion or a menstrual disturbance, with the ensuing diagnosis from pelvic examination. If the patient survive the shock and the hemorrhage be confined to the tube they usually still complain of occasional pains, with tenderness, in the same region. Some may pass a cast of the decidua and think that they have had a complete uterine abortion, and are often curetted for relief from the bleeding or the sanguinous discharge. If the hemorrhage ceases and the pain subsides, more or less, patient may be seen later, with a hematocele, often which becomes infected, with the formation of a pelvic abscess, or with intoxication from absorption of the blood clot, which is usually associated with leukocytosis.

If the tube rupture into the broad ligament, without much hemorrhage, the same picture occurs as with tubal abortion under the same conditions. The appearance of all these patients is much alike except those cases associated with abdominal hemorrhage of any marked degree, and in the latter the picture is striking, presenting all the classical symptoms of sudden abdominal bleeding.

Except in these latter cases where there is any doubt, examination should always be made under anesthesia.

Hugh Brent has formulated a symptom-complex that answers the requirements of the individual gynecologist or surgeon, in relation to the question of diagnosis of this condition, upon which he states the diagnosis may be made without reservation—that is, as follows: Menstruation missed or scant; reappearance of the menstrual flow after an interval of eight weeks or less, and its persistence as an irregular sanguinous discharge. The supposition on the part of the patient that an abortion is in progress. Passage of decidual cast or shreds. A moderate fall in the hemaglobin index. Paroxysmal colicy pains in the right or left of the pelvis. Soft, tender extra-uterine mass. Tympanites and general tenderness over the lower abdomen.

The diagnosis rests on the taking of a careful history, and a thorough pelvic examination, under anesthesia if necessary.

The time to operate is when the diagnosis has been made, and the type of surgical procedure to adopt should be based on the same judgment as that in treating a case of pelvic inflammatory disease, per se, conservatism being practiced at all times, remembering that according to Richard R. Smith 33 per cent. have normal uterine pregnancies later, and only 15 per cent. have a second ectopic pregnancy.

Below is a summarized report gleaned from a study of 85 consecutive cases observed in the clinic of the University Hospital:

In 25 cases history of venereal infection was positive.
In 26 cases history of venereal infection was suggestive.
In 34 cases history of venereal infection was negative.
In 48 cases menstrual history was typical.
In 23 cases menstrual history was atypical.
In 14 cases menstrual history was normal.
In 33 cases pain with fainting was present.
In 64 cases the left tube was the one affected.
In 21 cases the tube was ruptured at the time of operation.
In 2 cases the death was due to hemorrhage.
In 1 case was the pregnancy in the tubes bilateral.
In 1 case were multiple pregnancies found in one tube.
In 52 cases was the pelvic examination typical

In two cases the patients thought themselves to be pregnant and had attempted abortion.

In one case was the extrauterine pregnancy interstitial in type.

In three cases were the pregnancies abdominal in type, and two of these at full term.

In 65 cases the patients were white.
In 8 cases the uterus was enlarged.
In 2 cases tubal abortion was complete.
In 3 cases there was a recurrent ectopic on the other side.
In 2 cases patients returned here with normal uterine pregnancies.
In 4 cases transfusion was required.

In one case uterine and ectopic pregnancy were present at the same time.

In none of the cases was Cullen's sign present (Jour. A. M. A. 4-4-22. Novak).

In 11 cases was there a history of relative sterility extending over a period of several years.

In the report it will be noticed that the occurrence of ectopic pregnancy is more common in the left than in the right tube and can possibly be explained in the following manner, from an anatomical standpoint:

Venous drainage from the tubes is by the way of the right and left ovarian veins.

The left ovarian vein passes behind the sigmoid flexure of the colon, ascends vertically upwards and enters the left renal vein at a right angle and as a rule contains no valves.

The right ovarian vein ascends vertically also, and according to Gray contains at least one valve always, and empties into the inferior vena cava at an acute angle.

It can be said that early recovery from inflammatory processes depends largely on good blood supply and drainage of the part affected.

Anatomically and theoretically the blood supply is not as good in the left as it is in the right tube, for the left vein has an irregular course, usually has no valves to support the column of blood and works at another disadvantage because of back pressure from the renal vein, which it enters at a right angle, and is therefore longer in recovering from the inflammation and returning to normal as a preexisting infection of the tubal mucosa almost always has been present.

The impregnated ovum falls into the tube at an unfortunate time, before it has had a chance to return to normal, and develops or not as the case may be into a tubal pregnancy, but had the ovum fallen into the right tube it might have had free and unobstructed passage through the tube and entered the uterine cavity, and a normal uterine pregnancy resulted, for at that time the right tube by its quick recovery might have established patency.

This fact has been noticed here repeatedly in the gynecological clinic for pyosalpinx is by far more common in the left tube.

The conclusions that might be drawn from the case reports are that in a series of 85 cases:

The greatest number of pregnancies were in the left tube.

It is more common in white women, pyosalpingitis being the result usually in the colored women.

Ectopic pregnancy is a fairly common condition.

Emphasizes the taking of a careful menstrual history in all women with pain in the pelvis.

Examination under anesthesia in all doubtful cases.

Cases with fatal hemorrhage are rare.

To repeat an accepted fact of the close association of pelvic inflammatory conditions and ectopic pregnancy.

The time to operate is when the diagnosis is made.

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DIVERTICULA OF THE ESOPHAGUS

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In presenting this subject for your consideration it is essential that a sharp line of differentiation be drawn between esophageal dilatation and diverticulation. In the former the entire circumference of the tube is involved, while in the latter only a limited portion of the esophagus is affected, presenting a sac or hernia.

The types vary according to the manner of the development, and may be classified as traction, pulsion, and traction pulsion.

The location also varies. It may occur in the pharnyx, as well as any place in the gullet.

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* Read before the Gastro-enterological Society of the University of Maryland, Nov., 1922.

Pressure or Pulsion diverticula: The literature on the subject records this type as rare, but of greater clinical interest. Sippy has classified the locations as

(1) In the pharynx.
(2) At the junction of the pharynx and esophagus.
(3) Near the bifurcation of the trachea, usually just above the left bronchus.
(4) Below the level of the left bronchus.

Number two is the most vulnerable site, consequently is the most common location of the pulsion or pressure type.

They develop in pear shape sacs and increase in size and capacity, varying from a few c. c. to 250 c. c. or more, until their base may rest upon the diaphragm.

Pathology: The pouch-like sacculation deformity may be composed of one or all of the structures of the esophagus. Usually it consists of connective tissue and mucous membrane; the latter is but slightly altered, while the muscular layer may be atrophied or pushed aside. As the pouch develops, the esophagus is more or less obstructed and impaired by pressure.

Deep erosions or ulcerations are rare; but as the esophagus ranks about fifth in frequency among the organs, that becomes the seat of carcinoma; this condition should not be overlooked as a favorable site, by reason of constant local irritation.

ETIOLOGY

(1) Congenital defects.
(2) Loss of tonicity in a circumscribed area resulting from disease; the lodgment of a large bolus of food or a foreign body, with continued indiscreet diet.
(3) Pressure of the left bronchus against the esophagus may cause food to lodge on the wall of the esophagus, just above the bronchus, and produce tissue weakness and eventually sacculation.
(4) Diverticula developing in the lower part of the esophagus are usually located anteriorly or laterally; the etiology is obscure.
(5) Age—usually past 50 years.

Traction diverticula are the most common. The local weakening with corresponding bulging is nearly always due to contraction of scar tissue, attached to the outer surface of the esophagus. The cicatrix may follow inflammation of broncho-lymph-glands in the area of the bifurcation of the trachea of tubercular subjects.

Traction pulsion diverticulum may develop when the opening of the sac favors entrance and accumulation of food. This type may become large and necessarily serious.

Symptoms: Patients complain that food seems to lodge somewhere in the gullet; that it is growing progressively worse; that liquids are more easily swallowed; that food is easily regurgitated; that they cannot lie flat or with *head low without liquids welling up in the mouth,* even to the point of almost strangulation; loss of weight; weakness; no pain, but at times considerable discomfort or sternal distress according to the location and size of the diverticula.

Diagnosis: If large, may be palpated and percussed, with change of position of patient, enlarged after meals; welling up of food and liquids; plus the inability to pass the stomach tube or bougie without the aid of string guide. X-ray is the most useful and dependable. The esophagoscope should be used last, bearing in mind always the danger of rupture of a possible *aneurism.*

Report of case: Mr. B., aged 55 years; chief complaint, that solid foods were swallowed with difficulty.

During physical examination, in prone position, small amount of fluid regurgitated into the mouth, subsequently swallowed, only to be repeated, without relief.

Stomach tube could not be passed beyond the junction of the pharynx and esophagus. Referred to X-ray department, with the opinion: Esophageal obstruction. The case passed the fluoroscopic examination without detection; subsequent attempt to pass tube again failed; Rontgenologist accordingly advised with the result that a second fluoroscopic examination revealed a small pharyngo-esophageal diverticulum.

This particular case is reported for no other purpose than to show the importance of the stomach tube as a sound in the esophagus.

In the differential diagnosis the following conditions should be considered: Dilatation of the esophagus, aneurism, parenchymatous goiter.

Prognosis: Depends upon location and the etiological factors.

The pharyngeal and pharyngo-esophageal diverticula may be relieved or removed surgically in properly selected cases.

Diverticula having their origin below the sternum are considered inoperable. Ruptures may take place into the surrounding organs as trachea, bronchi, pleura and blood vessels with disastrous results.

Treatment: Surgical in selected cases. If condition develops late in life and evidences little or no hindrance to passage of food, the patient should be directed to eat slowly and avoid coarse foods. Appearing late in life, though impossible to pass tube, serious symptoms may never develop. If food stagnates and contains lactic acid or large number of leucocytes, irrigate; otherwise do not.

Many different positions should be tried most patiently, until one most suitable to swallowing is found. In some cases swallowing is best accomplished when the stomach is higher than the mouth. Tube can always be passed with safety by using string guide.

AN ANALYTICAL STUDY OF EXTRACRANIAL ANEURISM OF THE INTERNAL CAROTID ARTERY OF EROSIVE ORIGIN

By Nathan Winslow

(*From the Surgical Department of the University of Maryland*)

In this, the third instalment * of my serial on extracranial aneurism of the internal carotid artery, I have attempted to collect all of the cases of this lesion, reported in the literature as erosive. Naturally, some have been missed despite every effort to make the list complete. All told, I could discover the case-reports of only 18 examples of this aneurism published in the domestic and foreign literatures. The smallness of the number is undoubtedly due to the hesitancy of physicians to report their failures, notwithstanding equally as important lessons are to be learnt from mistakes as from successes. Of all the varieties of carotid aneurism, this is by far the most weird, the most confusing, the most treacherous. As the series, as a whole, is such a pathetic exhibition of colossal blunders in diagnosis and in treatment, I have made rather full abstracts of the cases. For the convenience of the reader, I have incorporated these in two tables: (1) those subjected to some form of radical arterial surgery; (2) those that were not.

The cases number 18, of which 12 died and 6 recovered; 12 were males, 5 were females and the sex of one was not stated. The ages were 11 months, 2½, 4, 6, 8, 9, 13, 16, 18, 19, 20, 20, 39, 48, 56, 58 and 60 years respectively. In one instance the age was not recorded. The left side was affected 12 times; the right 6. Radical operation was done 9 times. Of these patients, 5, or 55.5%, recovered and 4, or 44.5%, died. The deaths were attributed to hemorrhage, 2 times; sepsis, exhaustion and hemorrhage, once; pneumonia, once. Of the 9 cases not treated by arterial surgery, 1, or 11.2%, recovered and 8, or 88.8%, died. The causes of death in the unoperative series were: Spontaneous hemorrhage, 4 times; anesthesia, 1; hemorrhage from puncture, 3. Though operative relief holds out the prospect of only 55.5% of cures, this percentage contrasts more than favorably with 11.2% of cures when a watchful policy was adopted.

The vessels ligated were:

Common carotid, 5 times, with 2 cures and 3 deaths.
Common carotid and splitting of sac, once, cured.
Common carotid and internal jugular vein, 1, died.
Common carotid and division, later internal and external carotids and extirpation of sac, 1, cured.
Internal carotid, once, cured.

The spontaneous cure was reported by Lyot and Petit. The patient had had scarlet fever, followed by a severe inflammation of the throat, which was in turn succeeded by an energetically pulsating lump. The mass collapsed on compression of the

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* First instalment, Bulletin School of Medicine, University of Maryland, 1922, vii, 84.
* Second instalment, Bulletin School of Medicine, University of Maryland, 1923, vii, 125.

TABLE No. 1

No.	Surgeon, Reference	Sex, Age, Side	Duration,	Operation, Date	Cured	Died, Cause	Remarks
1	Liston: Lancet, London, 1842, 1, 864.	M 9 R	2 months	Lig. C. C. A. in the triangle of election About Oct. 21, 1841.	....	15 days hem.	Six years previously patient had had scarlet fever, 2 months ago cough, fever and a small swelling beneath the right ear, which increased slowly until 3 days before admission to the North London Hospital, October 20, 1841, when it suddenly began to grow and within a short time took in the area between the angle of the jaw to within an inch of the clavicle. It projected inwards into the mouth between the arches of the palate and impeded both deglutition and respiration. It fluctuated indistinctly. Intra-orally there was no pulsation. The mass was punctured under the impression that it contained matter, a gush of blood escaping from the incision instead of the expected pus. The hole was closed with hair-lip pins and twisted silk. Next day a ligation of the common carotid was made. The patient did nicely for 13 days, when there was a sudden gush of arterial blood from the forepart of the wound in the neck. This repeated itself six times when the patient sank into a profound collapse and died November 5, 1841. Autopsy showed the presence of an aneurism of the extra cranial portion of the internal carotid artery.
2	Heaton: Birmingham Medical Review, 1891, XXX, 304.	M 20 L	10 days	Lig. C. C. A. 7-3-1890.	....	July 6, 1890. hem.	This man had an attack of quinzy, June 23, 1890. Three days before admission he had a sudden profuse bleeding from the mouth and nose, which was controlled by nasal packing. July 2 he had another attack and July 3 there was a repetition of the bleeding. During the last two attacks blood oozed from the ear also. On July 2 some swelling was noticed in the left parotid region. This was taken for an inflamed gland. He had never had a bad throat before. On admission blood was observed slowly trickling from the left ear and the nostrils and there was a large, ill-defined swelling in the left side of the neck which pulsated in unison with the heart's beat. The mouth could be opened only with difficulty. The left tonsil was pushed across the midline. The swelling was soft and fluctuated. The mucous membrane was tense and shining and it pulsated synchronously with the swelling on the outside and in an expansile manner. No bruit or thrill could be detected. All pulsation was arrested by pressure on the common carotid. At 6 P. M., July 3, he had another hemorrhage for the arrest of which Bartlett tied the common carotid below the omo-hyoid muscle. During the induction of anesthesia breathing ceased, for which accident Haslam performed a tracheotomy. All pulsation ceased after tying the artery and the aneurism shrank considerably. The case progressed reasonably satisfactorily until July 6, when he aroused from his night's sleep stupid and drowsy and died in the afternoon. Autopsy demonstrated an aneurism at the upper end of the internal carotid artery which had ruptured into the mouth.

3	Postempski: La Riforma Medica, 1890, VI, part 1, 479.	 L		Lig. C. C. A. and spitting of sac. In 1890.	Yes	....	This case was reported at the meeting of the Association of Italian Surgeons, held at Florence in 1890. The patient, seen a month prior, had a false aneurism, complicating an abscessed tonsil. The post-operative course was uneventful.
4	Wulff: Muench. med. Wochsft., 1900, p. 687.	F 8 L	2 months	Lig. C. C. A. 2-4-1900.	Yes	....	A follicular tonsillitis was followed by apparent recovery. Shortly thereafter the attending physician noticed a swelling in the left tonsillar region which he lanced and for his efforts recovered only blood. The child did well until the middle of January, 1900, when the swelling returned and gradually increased in size. At that time she had no fever or anything of interest save the lump in the throat, which pulsated to both sight and touch. Suspecting aneurism a needle was inserted and pure blood aspirated. Treatment by compression was instituted, but the child objected so vehemently that it had to be foresworn. Immediately after ligation all motion in the sac ceased, never to return, but the clot in the sac eventually suppurated. This necessitated opening of the sac, after which the throat returned to its normal size and complete recovery ensued.
5	Zamboni in del Fabro: 13th Cong. intern. de méd., Par., 1900, sect. de chir. gén., X, 516.	M 60 R	3 years	Lig. I. C. A. In 1900.	Yes	....	No history of lues, attack of influenza three years previously, followed in a month by the sensation of a lump in the throat, oppressed breathing, hoarseness. One year prior to admission he noticed a mass in the throat, difficulty in swallowing the usual food, regurgitation of liquids through the nose, fever, vertigo, unconsciousness, convulsions for which he sought the advice of a doctor, who diagnosed the condition as abscess and advised incision, which the patient rejected. Becoming worse he sought out another physician, who inserted a needle and aspirated blood. The needle tract continued to trickle blood. At this juncture the patient visited the author, who could discover nothing abnormal except a rounded tumor occupying two-thirds of the pharyngeal cavity and localized in the right tonsillar region. The uvula was pushed well to the left, to sight the lump beat rhythmically. An exploratory finger found a round, stiff, elastic, smooth, fluctuating and strongly pulsating tumor which caused a muffling of the voice. Aneurism was diagnosed. The patient experienced no inconvenience from the ligation and left the hospital in eight days. Examination two months later showed the tumor reduced in volume, the sac firm, the voice clearer and deglutition improved.
6	Bruns in Blauel: Beitr. z. klin. Chir., 1903, XXXIX, 620.	F 58 L	10 years	Lig. and division of the C. C. A. 12-16-1902. Lig. of the I. C. A., E. C. A. and extirpation of sac.	Yes	....	This patient was admitted November 21, 1902, and discharged February 21, 1903. Until ten years ago she had enjoyed perfect health. Then she noticed a slowly growing lump in the left side of the neck beneath the angle of the jaw which four weeks previously had begun to increase rapidly in size. Only with difficulty could the mouth be opened and the patient complained of dysphagia, dyspnoea, pain, paralysis of the left hypoglossal and recurrent laryngeal nerves. December 14, 1902, there was a sudden cessation of breathing, th

TABLE No. 1—Continued

No.	Surgeon, Reference	Sex, Age, Side	Duration,	Operation, Date	Cured	Died, Cause	Remarks
							pulse became weak and for resuscitation a tracheotomy was done. She experienced no evil results from the ligation of the common carotid, no reappearance of pulse. The lump became somewhat smaller, but dysphagia persisted, so the second operation was made. Again the recovery was excellent. When seen April 4, 1903, the wound had closed, the hoarseness was unchanged, the hypoglossal was still paralyzed, there was no swelling either inside or outside the throat, no bruit or pulsation. Originally there was a swelling both internally and externally, bruit, expansile pulsation synchronous with the beats of the arteries.
7	Helman: Yezhemiesyachnik Ushnikh Gorlovikh Inosovikh Bolieznei, St. Petersburg, 1911, VI, 75. Translated from the original for this paper by E. Gordon, Univ. of Maryland. Also in Medycyna i. kronika lekarska, Warsaw, 1909, XLIV, 681 and 703. Translated for this paper by A. Kunkowski, Univ. of Maryland.	F 56 R	1 year	Lig. C. C. A. 1909 or 1910.	....	Yes.	The woman sought relief for a sensation of a foreign body in the right side of the throat. Although she had been conscious of its presence for nearly a year she had not at any time suffered from pain or difficulty in swallowing or in speaking. Upon inspection the right half of the soft palate and the right wall of the pharynx was found to bulge prominently forward in the shape of a spheroidal tumor, the smooth and glistening surface of which merged imperceptibly with the mucous membrane of the surrounding parts. The right tonsil was somewhat enlarged and almost touched the uvula. At first glance the lesion appeared like a peri-tonsilar abscess. However, the long duration of the condition, the absence of pain and the lack of evidences of an inflammatory process, as well as the lack of disturbance of the general health, were contradictory to such a diagnosis. This diagnosis was rendered still more doubtful because of the following unusual features. The whole smooth surface of the tumor was actively pulsating, the movements were rhythmical and synchronous with the radial pulse and struck the palpating finger with force and abruptness. It was elastic and seemed confluent with the right side of the pharynx. A posterior rhinoscopy was performed with extreme difficulty and with partial success only. However, it was observed that the swelling filled almost all of the right half of the nasopharynx. The right ear drum was tensely retracted. Upon being questioned the patient stated she had had tinnitus in that ear. In accordance with these findings it was clearly a case of aneurism of one of the carotids, most likely the internal. On the same day the patient was demonstrated before the Lodz Medical Society, where a colleague suggested that a trocar be introduced to verify the diagnosis, a procedure which Helman deemed neither expedient nor safe. The patient was advised to have the common carotid artery ligated, but promptly refused on the ground that the thing did not bother her enough, stating she had sought the consultation only because she happened to be in Lodz and her daughter had urged her to have the throat examined.

							On placing the bell of the stethoscope on the tumor a loud murmur was heard which corresponded in time with the heart beat. The blow was very much diminished by pressing on the common carotid. A similar but very much fainter bruit was heard over the carotid. The patient was given potassium iodide and told to consult a surgeon if her symptoms became more severe. Helman accidentally learnt several months later that the patient had undergone an operation at Warsaw and an aneurism of the internal carotid artery found. Despite a successful operation the patient died of a postoperative pneumonia according to the surgeon who performed the operation. According to Helman a colleague in the dispensary had almost opened this aneurism for abscess. He had failed to recognize the condition and had only sent the woman to the clinic for demonstrative purposes, having advised her to return to the outpatient department for puncture. This case is reported under the name Gelman in the Russian report. It is evidently the same case recorded under the name Helman in the Polish language. The confusion arises from the fact that there is no letter H in the Russian tongue. Helman had no knowledge of any other case reports in the Russian literature, but spoke of four cases of traumatic origin published in Polish. In so far as the woman gave a history of having had a sore throat many months previously Helman was inclined to believe the case as of erosive origin, rather than spontaneous.
8	Klarfeld: Wien. klin. Wochsft., 1915, XXVIII, 1361.	M 18 L	7 days	Lig. C. C. A. and I. J. V.	....	12 hours after operation sepsis, exhaustion hemorrhage.	This was a false aneurism in the course of an acute bilateral tonsillitis. There was high fever and a large mass under the angle of the left jaw. On the seventh day there was a profuse hemorrhage from the mouth which was not entirely arrested; so Marschik ligated and divided the common carotid artery. As the internal jugular vein was injured during the course of the operation it was likewise tied and resected. The sac was incised and the rupture demonstrated. The nature of the lesion was proved at autopsy to be an aneurism of the internal carotid.
9	Ransohoff: Annals of Surgery 1918, LXVIII, 152.	F 16 L	About one week	Lig. C. C. A. in the triangle of election. 1-20-1918.	Yes	....	This patient had had a septic sore throat with much swelling of the left submaxillary glands. These suppurated and were lanced eight days before admission. She had had a hemorrhage from the drainage opening three days before she came to the hospital and a repetition of great severity the day of entrance, January 20, 1918. The patient was immediately put under gas and the infected glands removed. When the throat was examined it was found that the hemorrhage was from an aneurism of the internal carotid artery. The examining finger detected in the postero-lateral wall of the pharynx a swelling as large as a peach, elastic, and distinctly pulsating. Compression of the common carotid caused the pulse to disappear. Owing to the inflamed state of the cervical tissues it was decided to tie the common instead of the internal carotid artery. Before the artery was tied it was compressed for five or six

TABLE No. 1—Continued

No.	Surgeon, Reference	Sex, Age, Side	Duration,	Operation, Date	Cured	Died, Cause	Remarks
							minutes with the patient partly from under the anesthetic. As no bad results were noticed the artery was divided between two ligatures. Marked dyspnoea arising from pressure of a subcutaneous hematoma on the larynx, a precautionary tracheotomy was done under local anesthesia in the afternoon. The patient made an uninterrupted recovery. Three months later she was perfectly well. There had been no return of the pulsation in the temporal artery.

TABLE No. 2

No.	Surgeon, Reference	Sex, Age, Side	Duration	Cured	Died, Cause	Remarks
10	Neuffer: Ztschft. f. Wundaertze u. Geburtsh., 1852, IV, 206.	M 13 L	....	....	2 days hem.	The attack began as an angina tonsillaris in the fall of 1851, with fever, loss of appetite and increasing enlargement of the tonsils, especially the left. The food passage was so narrowed by the swelling as to prevent the ingestion of solids and even liquids could scarcely pass. As the disease progressed the jaws became fixed and could be opened but a slight distance, rendering examination of the oral cavity very difficult. External remedies were employed futilely and on the 12th day of the disease the patient had a profuse hemorrhage from the mouth. This was repeated on the 13th day, with a fatal termination. No explanation was offered as to the cause. Autopsy revealed a nutmeg sized aneurism of the extracranial portion of the internal carotid artery with an opening into the mouth.
11	Lyot et Petit: Gaz. méd. de Par., 1897, 10 s., 1, 159.	F 19 L	1½months	Yes Spontaneous.	....	This patient had had a scarlet fever followed by a severe inflammation of the throat and later a walnut sized growth which pulsated energetically, but could be emptied by compression. On puncture pure blood was obtained. Peculiar to relate, though the patient received no treatment, the mass diminished to the vanishing point in about three months. The symptoms, lump both on the inside and the outside of the pharynx, expansile pulsation, inconvenience in deglutition, swelling projecting into the fauces, elastic, uniform consistence, pulsatile in all directions, elasticity, on aspiration the obtainal of a syringe full of blood, reduction in size by pressure on the common carotid, systolic souffle on auscultation,would seem to confirm the diagnosis. Ligation of the internal carotid was considered, but withheld owing to the debilitated condition of the patient, and a waiting policy adopted instead. In 15 days the lump in the throat as well as that in the neck had almost disappeared but the remnant was still expansile. The patient left on a trip, to report back in a month. When she returned there was no evidence of the aneurism, the lump in the throat and neck had entirely gone. She was first seen July 27, 1896, in the service of Le Dentu.
12	Johnson: Trans. Amer. Laryng., Rhinol., and Otol. Soc., 1901, VII, 226.	M 4 L	10 days	....	5 months hem.	Patient first seen March 15, 1900, in consultation with another physician who thought the swelling an abscess. Preparation had been made for puncture, but desisted in owing to the unruliness of the patient. The child died September 11, 1900, from repeated hemorrhages.

13	Hirsch: Monatshft. f. Ohrhlk., Berl. u. Wien, 1914, XLVIII, 780.	M 6 L	3 years	....	On table from anesthetic (Chloroform)	This patient had had bleeding from the mouth and ear following an attack of scarlet fever. Below the left ear was a firm, elastic tumor about the size of a child's fist. Internally a tumor could be seen springing from the left pharyngeal wall and extending to the midline. It was tense and elastic to the touch. Hirsch attributed the trouble to middle ear disease and had determined to do a radical mastoidectomy. As the patient was going under the anesthetic he suddenly ceased breathing. A rapid laryngotomy was done to no avail. No reason could be assigned for the lesion. No Wassermann was permitted. As it was feared an autopsy would not be granted, an incision was made along the anterior border of the sternocleidomastoid muscle and an aneurism of the internal carotid artery in its extracranial segment discovered.
14	Velebil: Casopis Lékarüv Ceských, Prague, 1913, LII, 976. Translated from the original for this paper by V. Joska, Univ. of Maryland.	M 2½ R	....	....	June 13, 1909. Hem. from puncture.	This patient was brought to the dispensary by his father, June 13, 1909, for dyspnoea and dysphagia. In the course of the examination the physician found a bulging mass in the region of the oropharynx, which fluctuated and had all of the signs of a retropharyngeal abscess. Operative relief was suggested to the father and accepted. The doctor thereupon took a pair of forceps and bluntly punctured the swelling. Instead of the expected escape of pus, a stream of blood spurted out through the mouth and nose. Packing proved futile and the child died in a few minutes. The autopsy protocol made by Kimla, June 14, 1909, was suppurative otitis media of the right side, mastoid cells of the same side filled with pus, necrosis of the bone in the vicinity of the carotid canal, aneurism of the internal carotid in the neck pushing before it the lateral pharyngeal wall. Opening into the throat was the stoma made by the forceps. The tonsils were slightly hypertrophied. Upon pressure a yellowish exudate was forced out of the crypts. The glands of the neck were swollen and hard. On section the surface was grayish white and the cellular elements homogeneous in appearance, with no signs of acute inflammation. From the pus of the ear were recovered the streptococcus and the staphylococcus. Although the author advances no cause for the aneurism, it is in all probability erosive in so far as the sac was located at the entrance to the carotid canal and even extended into it.
15	Vas: Jahrbuch f. Kinderhlk., 1916, LXXXIII, 493.	M 11 mos. L	3 weeks	....	Incised for abscess. Died shortly thereafter.	The child when seen in May, 1913, had had a scarlet fever for three weeks and for some days an increasing difficulty in swallowing and breathing. The examination revealed a diffuse, palpable swelling, the size of a child's fist in the left side of the neck; the head was inclined somewhat to the right and backwards; the throat was deeply injected but without visible arching. By digital examination, deep in the left retropharyngeal region a fluctuating swelling the size of a hazel nut could be felt. A diagnosis of abscess was made. As the tumor fluctuated and the dysphagia and dyspnoea were pressing incision was practiced. With the puncture there escaped first a slight quantity of bloody mucus followed quickly by pure blood. It was thought a blood vessel had been cut. As the blood was escaping freely a finger was inserted for its control and a tracheotomy was done preliminary to ligation of the common carotid, but the child died before the latter procedure could be accomplished. Autopsy revealed an aneurism of the internal carotid artery in its extracranial portion with a hole in its wall. The supposition was the condition followed an angina, the infectious process spreading to the lymphatic glands around the internal carotid, whose walls became softened by the inflammatory products.
16	Beck: Monatshft. f. Ohrhlk. u. Laryngo-Rhinol., 1918, LII, 606.	M 20 L	....	....	Repeated hemorrhages from spontaneous rupture.	The patient, a soldier, had never been at the front. He had had treatment in a sanitarium for bronchial trouble, whence he was transferred to a reserve hospital. While there he had on May 12, 1917, without ascertainable cause, a profuse bleeding from the nose and mouth, which was controlled by tampons. These were removed the next day, followed shortly thereafter by active bleeding, for which he was transferred to the service of Beck. At this time inspection of the throat revealed only a few raw spots in the mucous membrane of the left side. These were thought to be the result of the pressure of the tampons, so the patient was returned to the medical service. On May 15 there was a repetition of the bleeding. This was again controlled by pressure. On May 17, 1917, an uncontrollable hemorrhage set in, with the death of the man. At autopsy an aneurism of the internal carotid artery was found about 5

TABLE No. 2—Continued

No.	Surgeon, Reference	Sex, Age, Side	Duration	Cured	Died, Cause	Remarks
						cm. above its origin at the point where it is crossed by the styloglossus muscle. It was the size of a walnut and fused with a large tubercular gland. In its immediate vicinity were a number of similarly diseased but smaller lymph nodes. In the oropharynx at a level with the soft palate and 1½ cm. lateral to the uvula was a rent closed by a clot but penetrable to a small sound, the site of the rupture of the aneurism into the pharynx. He had in addition a bilateral pulmonary tuberculosis. It is noteworthy that despite the size of the aneurism no enlargement of the lateral pharyngeal wall was detected. The failure of the aneurism to point here was ascribed to its being forced backward by the pressure of the contacting lymphatic gland. To the same cause was the overlooking of pulsation attributed. The diagnosis was made at the autopsy table.
17	Pusateri: Il Policlinico, Roma, 1918, sez. prat., XXV, 475.	M 38 R	....	....	6½ months after onset of the trouble from hemorrhage.	In order to avoid returning to the front, a soldier on the 8th of May, 1917, introduced nitric acid into his right ear. The act was followed by vomiting, vertigo, headache and acute pain in the right mastoid bone. Seventeen days later facial paralysis developed and eight days later blood began to flow from the nose. At the end of a month the otorrhagia and rhinorrhagia ceased spontaneously, but a slight otorrhoea persisted. On November 21, 1917, when the patient was about to be sent on an extended leave the hemorrhage recurred, and on the night of November 25-26 a profuse hemorrhage soon caused death. Autopsy showed two aneurisms, one of the internal carotid artery and one of the internal jugular vein, both of which had ruptured. In addition there was a collection of pus beneath the dura mater. Thus the patient was doomed anyway, for had the aneurismal sacs not ruptured, death would inevitably have occurred from the meningitis. This case vividly illustrates the danger of an inflammation extending through the bony walls of the ear and so weakening the walls of the contiguous vessels as to permit of the formation of aneurism. The lesion was not recognized until autopsy.
18	Schlagenhaufer: Zentrbl. f. allgem. Pathol. u. Pathol. Anat., 1918-1919, XXIX, 423 & 424.	M 48 R	....	....	4 days after incision for suppurating lymph glands.	The trouble began in October, 1916, when the patient was taken with a pain in the right side of the neck and dysphagia. In February, 1917, the right side of the neck began to swell and the enlargement progressed steadily but slowly till April 6, 1917, when owing to its redness, painfulness and evident fluctuation at its lower pole it was incised. With the escape of a thick stream of blood the operator then only realized the nature of the malady. Gauze tampons were used to still the hemorrhage. At autopsy a large cavity filled with clotted blood was found to communicate with the internal carotid artery just above its origin. The soft tissues were bathed in a purulent secretion from which gram negative cocci were isolated.

common carotid artery and on puncture furnished pure blood. Though the patient received no treatment the swelling diminished to the vanishing point in three months. Ligation of the internal carotid artery was considered but rejected on account of the poor condition of the patient.

The most striking feature in this group of cases is the extreme youthfulness of the patients, 12 being recorded as under 21 years of age. This is a matter of no little practical significance, in so far as peritonsillar abscess is a very common disease in young people. The treatment appropriate to the latter may lead to grave consequences if applied to the former is strikingly attested by the death of 4 of these patients. Wulff was spared this embarrassment by ligating the common carotid artery, but Liston, Vas, Velebil and Schlagenhaufer were not so fortunate. Helman under similar circumstances changed the diagnosis of a colleague from abscess to aneurism. This patient was later operated upon at another clinic but died of a postoperative pneumonia. Zamboni saw a case that others had diagnosed as abscess and advised incision. He recognized the nature of the affection, ligated the internal carotid artery and saved his patient's life. On the other hand the proclivity of this aneurism to spontaneous rupture has led to equally as disastrous consequences by the physician in charge failing to recognize its nature. A case in point is Neuffer's. The patient had had an angina tonsillaris, followed by an increasing enlargement of the left tonsil. As the disease progressed the food passage became so narrowed as to prevent the swallowing of solids and the jaws could be opened but a slight distance. On the 12th day of the disease the patient had a profuse hemorrhage from the mouth with a fatal repetition the next day. The source of the hemorrhage remained in doubt until autopsy revealed an aneurism of the internal carotid with an opening into the mouth. Amongst others Johnson lost a patient under quite similar circumstances. In view of the above-mentioned catastrophies the prompt recognition of fauceal aneurism consecutive to scarlet fever, influenza, cervical adenitis, septic sore throat and inflammatory tonsillar disease is of the utmost importance, as a false move may jeopardize the safety of the patient's life.

In addition to the cases tabulated Molinié (Rev. de Laryng., d'Otol., de Rhinol., 1921, xiii, 97, abstracted by Bourgeois in Jour. de Chir., 1921, xviii, 254) cites the following very suggestive case. The patient, a woman, who had suffered with an otitis media from infancy, underwent an operation in 1898, evidently for mastoiditis. In 1905 a second operation was interrupted by the occurrence of a profuse hemorrhage, which was controlled by packing the wound with gauze. Ultimately the cavity filled up with a dark red tumor from which, without apparent reason, two hemorrhages occurred. The lump pulsated neither to sight nor touch unless compressed when an indistinct pulsation was both seen and felt. In 1906, paralysis of the facial nerve developed and in 1920, of the auditory, the glasso-pharyngeal, the pneumogastric and spinal accessory. Moliné at first regarded the lesion as an arterial or arteriovenous aneurism, but later discarded this diagnosis in favor of dilatation of the lateral sinus and bulb of the internal jugular vein, ascribing the pulsation to transmission of the cerebral pulse. Another doubtful case is that reported by Majewski (Kronika Lekarska, 1903, xxiv, 658, translated for this paper by A. Kunkowski, Univ. of Maryland). The patient, a man aged 64, complained of a pain in his neck of three weeks' duration, and for two weeks he had had a swelling in the left side of his neck the size of an apple. The overlying skin was neither red nor raised. The lump was opened under ethyl chloride applied locally and a small amount of whitish exudate evacuated. Eight days later blood escaped from the wound. This was arrested by tampons. On the 11th day during the process of redressing there was a repetition of the bleeding. Again tampons staunched the flow of blood. Three days later there was a renewal of the bleeding. This time the flow could not be stopped by pressure, so the patient was taken into the hospital, where an incision was made through the previous operative site. The hemorrhage was now found to be deep seated. First the internal carotid artery was tied near its origin, but the bleeding continuing, the vessel was still further exposed and a rent from which the blood was pouring disclosed. A second ligature was placed above this point. The bleeding now stopped, but the day following there was some elevation of temperature; a pulse rate of 120 and a fully developed hemiplegia. Death occurred 36 hours after the operation. Helman (Medycyna I Kronika Lekarska, 1909, xliv, 685, translated for this paper by A. Kunkowski, Univ. of Maryland) refers to two cases of large vascular pharyngeal enlargements reported by Stoerck (Special Pathol. by Nothnagel, Vol. xiii) as hematomata from which when opened there flowed a very profuse hemorrhage, the arrest of which proved exceedingly difficult. From the description Helman says, it is extremely difficult to judge whether these were aneurisms or inflammatory swellings with bloody contents. The same author mentions on the same page that in 1895 Grossmann showed a case of aneurism of the throat before the Wiener laryng. Gesellschaft, successfully treated by ligation of the common carotid artery. Schulte (Monatshft. f. Ohrhlk., 1904, xxxviii, 117) reports the following case: The patient, a woman, aged 26, consulted him, October 8, 1903, for a running from the ear and a left hemicrania of some weeks' duration. She stated that she had had a discharge from the left ear off and on for many years. On examination Schulte discovered a superficially smooth, bluish-red growth which he took for a polypus projecting through a rent in the drum. This he incised and was rewarded with the escape of a strong stream of bright red blood. The flow was brought partially under control by gauze packs and the diagnosis changed to aneurism of the internal carotid. As from time to time there was a renewal of bleeding, Dr. Schneider made a ligation of the common carotid artery on October 11, 1903, apparently with success, but the next day the bleeding recurred and did so daily until October 15th, when a solution of gelatin was injected into the patient. There was no further bleeding until October 26th, then a daily repetition to October 30th and from then to November 18th, intermittently, when following a total of 19 injections of gelatine, hemorrhage finally ceased and the patient was discharged December 14, 1903.

Hirsch (Monatshft. f. Ohrenhlk. u. Laryngo-Rhinol., 1914, xlviii, 782) states Heine found in a 53 year old man an aneurism of the internal carotid. Concerning the further course of the case he could add nothing. This is in all probability the same case that Heine reports in the Berlin. klin. Wochsft., 1901, xxxviii, 619, under the title of a bleeding from the internal carotid artery in consequence of erosion. The patient, a woman, aged 56, was admitted to the hospital, February 13, 1900. At 3 years of age she noticed a swelling behind the right ear. This opened at the age of 6 and discharged for 15 years. Pain was first experienced in August, 1899, and some days later a right hemicrania developed. At the base of the right mastoid process was a fistula filled with a stinking mass. February 16 a radical mastoidectomy was done and the patient was discharged April 14, though the wound was still running. She was readmitted August 27th and the wound curetted the same day. During the manoeuvres the carotid artery was exposed. To sight it did not pulsate. At the change of dressings, September 1, a stream of dark blood suddenly escaped. Pressure on the common carotid did not influence the flow. Arrest of the hemorrhage was finally accomplished by iodoform gauze tampons. He attributed the hemorrhage to an erosion of the internal jugular. The bleeding recurred several times thereafter, but was easily controlled by pressure. The woman, however, did badly and died October 1, 1900.

Autopsy showed that the blood had come from an erosion of the internal carotid artery superinduced by middle ear disease, and death was caused by sepsis. There was besides a pool of pus in the vicinity of the petrous bone and several abscesses in the brain.

Benjamins (Archiv f. Ohrhlk., 1908, lxxvi, 240) records a case of aneurism of the right internal carotid with fatal bleeding from the external auditory meatus from necrosis of the floor of the canal following the insufflation of powdered arsenic by a "Medicine-Man" for the cure of a discharge. The patient, a woman, fell into Benjamins' hands shortly thereafter, but died. Autopsy revealed an aneurism of the internal carotid, but I could not determine whether it was in the extracranial portion of the vessel or in the bony canal. Certainly there were no pharyngeal symptoms. At the time of the hemorrhage Benjamins believed the source of the bleeding an eroded jugular vein because pressure on the common carotid artery failed to stop the hemorrhage. Quite a similar case is Ruttin's (Beitr. z. Anat., Phys., Path. u. Ther. des Ohres, der Nase u. des Halses, 1919, xi, 224). A soldier was admitted to the hospital, January 17, 1918, for bleeding from the left ear, nose and mouth. In November, 1917, while serving on the Italian front, he was buried by the explosion of a shell. Since 1914, he had had a discharging left ear which was rendered worse by the accident. On entrance the left ear was discharging a quantity of foul pus and the man complained of severe pain in the head. After admission the hemorrhage from the nose, mouth and ear renewed itself on several occasions. Therefore on January 18, 1918, a radical mastoid operation was undertaken. On January 20, there was renewed bleeding from the mouth and nose, and the man died. An autopsy showed the presence of an aneurism of the internal carotid artery in the knee of the carotid canal the wall of which was eroded. Ehrmann of Mulhouse (Bull. et mém de la Soc. de Chir. de Par., 1878, n.s., lv, 664) reports the following very suggestive case. The patient, a man, aged 22, entered the hospital April 28, 1875 in the service of Dr. Battenburg for an angina tonsillaire of a few day's duration which had localized on the right side. He complained of a pain in the right submaxillary region, dysphagia and fever. May 1st, toward 6 a. m., the abscess opened spontaneously into the throat, at the same time a stream of red blood flooded the mouth. This ceased spontaneously, but at 9.30 a. m. a new hemorrhage occurred. It was as sudden in onset as the first, but less abundant. Inspection of the throat, which was accomplished with difficulty owing to the locking of the jaws, revealed redness, edema, and tumefaction of the velum and a distinct impulse was imparted to a palpating finger. Scarcely a half hour later there was a repetition of the bleeding but on a grander scale. The patient was now in a state of syncope, quite exsanguinated, pulse thready and extremities cold. Delay was no longer permissable, so Ehrmann, with the assistance of Battenburg, made a ligation of the common carotid artery. On account of the size of the swelling the vessel had to be ligated below the omohyoid muscle. The post-operative course was favorable. There was no further bleeding, but by the end of the first week there was a tolerably severe febrile reaction with a persistence of the submaxillary puffiness. Finally there was a discharge into the mouth of a fetid pus. At no time were there any cerebral or nervous symptoms. In the beginning there was some aphonia, which, however, completely disappeared in three or four days. The patient was discharged cured, June 18, 1875. Ehrmann considered this a case of erosion of the internal carotid artery. A number of similar cases have been reported, i. e., by H. Fischer (Arch. f. klin. Chir., 1899, lviii, 435), Pepper (Br. Med. Jl., 1882, ii. 892), and others.

Billroth (Arch. f. Ohrenhlk., 1869, iv, 53), relates that a previously healthy man, aged 27, was admitted to the hospital, Nov. 23, 1864, on account of syphilis. November 28, he complained of pain on movement of the head or opening of the mouth. The glands beneath the mastoid process were enlarged and sensitive, pressure on the mastoid process was without pain. On December 2, there was a sudden bleeding from the right ear. This was repeated on Dec. 3, 4, 5, but to a lesser degree and was now admixed with pus. There was a diffuse, red puffiness in the region of the lower jaw. December 12 and 13, profuse bleeding from the mouth and nose was stilled by pressure to the carotid. Dec. 13, a swelling was noticed in the palatal region. With a mirror a small opening in the lateral wall of the pharynx was seen from which pus exuded. On account of these bleedings a ligation of the rt. C. C. A. was done. On Dec. 23 there was again a free hem. from the nose, mouth and ear which was brought under control by pressure on the lt. C. C. A. Dec. 27, lig. of the lt. C. C. A. was practised; Dec. 29, repetition of the hemorrhage, exitus. Autopsy showed a fistulous tract beginning in the right auditory canal and running down the neck to an eroded internal carotid artery.

Hermann (Wiener med. Wochsft, 1867, Nos 30, 31, 32), according to Schwartze, (Arch. f. Ohrenhlk., 1869, iv, 294) records the case of a girl, aged 9, left otorrhoea for 8 years, on February 20, 1866, who had had a hemorrhage from the left ear. Had the patient's condition warranted he would have tied the C. C. A.; exitus Feb. 26, 1866, autopsy revealed an erosion of the internal carotid artery in its course through the carotid canal.

Zeroni (Arch. f. Ohrenhlk., 1901, li, 98) mentions that a man, aged 29, came to the clinic April 5, 1900. He had had a discharge from the ears. He sought relief for paralysis of the right side of the face, pain, noises, dizziness and discharge from ear all in existence since Feb. 10. April 6, radical mastoid operation. With the removal of the drains on April 13, a column of blood spurted up from the depths of the wound, stopped by packing. April 15, hemorrhage repeated itself, controlled by pressure to C. C. A., and renewal of the gauze packing. Before ligation of the C. C. A. could be practised patient died, April 16, 1901.

Autopsy showed an erosion of the internal carotid artery in its course through the carotid canal and pulmonary tuberculosis.

BOARD OF TRUSTEES ENDOWMENT FUND
UNIVERSITY OF MARYLAND

Report of B. Merrill Hopkinson, M. D., Treasurer,

Covering the period January 10, 1922, *to January* 9, 1923

FACULTY OF PHYSIC FUND

1922			
Jan 10	—Balance Central Savings Bank		$1,732.96
Feb. 6	—1 1,000 Lake Erie & Western R. R. 5%	$919.86	
April 1	—Interest Cent. Sav. Bank, Oct.-April		26.72
April 24	—1 1,000 Consol. Coal Co., 5%	915.53	
Oct. 1	—Interest Cent. Sav. Bank, April-Oct.		12.78
Dec. 11	—Md. Casualty Co., Treasurer's bond.	1,835.39	
1923			
Jan. 8	—Interest on all bonds to date	12.50	1,864.38
		$1,847.89	$3,636.84
			1,847.89
Jan. 9	—Balance Central Savings Bank		1,788.95

This Fund consists of:

2	1,000	American Agri. Chem. Co., 5%	1,963.06
1	500	Cent. Hudson G. & E., 7%	500.00
3	1,000	Cent. Hudson G. & E., 7%	3,000.00
1	1,000	G., Car. & Northern, 5%	1,000.00
5	500	Regents Univ .of Maryland, 5%	2,500.00
1	1,000	Public Serv. Corp., 5%	1,000.00
1	1,000	Minneapolis Gas Light Co., 5%	1,000.00
1	1,000	Edison Elec. Co., 5%	1,000.00
1	1,000	Fairmount & Clarks'bg Trac. Co., 5%	1,000.00
1	1,000	Consol, Gas., Balto., 4½%	980.00
2	1,000	Omaha & Council Bluffs St. Ry., 5%	1,940.00
2	1,000	Cincin. Gas & Trans. Co., 5%	1,960.00
2	1,000	West Penn Power Co., 5%	1,940.00
2	1,000	Cumberland Co. P. & L., 5%	1,940.00
2	1,000	Louisiana Port Serial Com., 5%	2,000.00
1	1,000	Grand Trunk Ry., 7%	1,000.00
1	1,000	Penna. R. R. 6½%	1,000.00
1	1,000	Balto. Co., 5%	1,000.00
1	1,000	Lake Erie & Western R. R., 5%	1,000.00
1	1,000	Consol. Coal Co., 5%	1,000.00
1	500	First Liberty Loan, 3½%	500.00
3	1,000	Third Liberty Loan, 4¼%	3,000.00
2	1,000	Fourth Liberty Loan, 4¼%	2,000.00
1	500	Fourth Liberty Loan, 4¼%	500.00
			$36,512.01

GENERAL ENDOWMENT FUND

1922			
Jan. 10	Balance Cent. Sav. Bank		$1,084.29
Feb. 6	1 1,000 Dutch East Indies 6% Gold Bond	$950.83	
April 1	Interest Cent. Sav. Bank, Oct.-April		14.52
May 30	Rent Box Colonial Trust Co.	10.00	
Sept. 26	Adjusted Int. Dutch E. Indies Bond	.91	
Oct. 1	Interest Cent. Sav. Bank, April-Oct.		7.57
Jan. 8, 1923	Interest on all bonds to date		641.91
		$961.74	$1,748.29
			961.74
Jan. 8	Balance Cent. Sav. Bank		786.55

This Fund consists of:

1	500	Regents Univ. of Maryland, 5%	500.00
1	1,000	Ga. & Ala., 5%	1,000.00
1	1,000	Ga., Car. & Northern, 5%	1,000.00
1	1,000	Omaha & Council Bluffs R. & B., 5%	1,000.00
1	1,000	Consol. Coal Co., 6%	1,000.00
2	500	Consol. Coal Co., 6%	1,000.00
2	1,000	St. Jos. Ry. L. N. & P. Co.	2,000.00
1	1,000	Edison Elec. Co., 5%	1,000.00
1	1,000	Baltimore Co., 5¾%	1,000.00
1	1,000	Dutch E. Indies, 6%	1,000.00
1	500	First Liberty Loan, 3½%	500.00
1	1,000	Third Liberty Loan, 4¼%	1,000.00
1	500	Fourth Liberty Loan, 4¼%	500.00
			$13,286.55

CATHERINE GIBSON FUND

1922		
Jan. 10	Balance Cent. Sav. Bank	$699.43
April 1	Interest Cent. Sav. Bank, Oct.-April	13.88
Oct. 1	Interest Cent. Sav. Bank, April-Oct.	14.87
Jan. 8, 1923	Interest on all bonds to date	81.88
		810.06

This Fund consists of:

2	500	Regents University of Maryland, 5%	$1,000.00
1	500	Fourth Liberty Loan, 4¼%	500.00
			$2,310.06

CHARLES M. HITCHCOCK FUND

1922			
Jan. 10	Balance Cent. Sav. Bank		$215.96
April 1	Interest Cent. Sav. Bank		3.47
June 10	Scholarship, G. S. Kerdasha	$125.00	
June 10	Scholarship, J. J. Krager	125.00	
		$250.00	

Oct. 1—Interest Cent. Sav. Bank, April-Oct.	2.63
Jan. 8, 1923—Interest on all bonds to date..	250.00
	472.06
Less	250.00
Jan. 8, 1923—Balance Cent. Sav. Bank....	222.06
This Fund consists of Ten 500 Regents University of Maryland, 5%..................	5,000.00
	$5,222.06

LEO KARLINSKY FUND

1922	
July 18—Interest 6 months (3) 1,000 Gt. No. Ry. Co., 7%..................	$105.00
Oct. 1—Interest 6 months Cent. Sav. Bank..	.70
1923	
Jan. 8—Interest 6 months (3) 1,000 Gt. No. Ry. Co., 7%..................	105.00
Jan. 8—Balance Cent. Sav. Bank..........	$210.70
This Fund consists of Three 1,000 Gt. No. Ry. Co. 7% bonds........................	3,000.00
	$3,210.70

LEON FRANK FUND

1922		
Jan. 10—Balance Cent. Sav. Bank..........		$129.74
April 1—Interest Cent. Sav. Bank, Oct.-April		2.15
June 10—Scholarship, D. R. Newcomer......	$125.00	
Oct. 1—Interest Cent. Sav. Bank, April-Oct.		1.73
Jan. 8, 1923—Interest on all bonds to date..		135.00
		$268.62
Less		125.00
Jan. 8, 1923—Balance in Cent. Sav. Bank...		$143.62
This Fund consists of:		
1 500 Central Hudson Gas & Elec. 7% bond		500.00
1 1,000 St. Jos. N. L. & P. Co., 5% bond....		1,000.00
1 1,000 Omaha & Council Bluffs Ry. & B. 5% bond		1,000.00
		$2,643.62

RANDOLPH WINSLOW FUND

1922	
Jan. 10—Balance Cent. Sav. Bank..........	$71.56
April 1—Interest Cent. Sav. Bank, Oct.-April	.97
May —Interest 5 500 Regents Univ. of Md., 5%	62.50

June 10—Scholarship, L. A. Schultz	$125.00	
Oct. 1—Interest Cent. Sav. Bank, April-Oct.		.60
Nov. 18—Interest 5 500 Regents Univ. of Md., 5%		62.50
		$198.13
		125.00
1923		
Jan. 8—Balance Cent. Sav. Bank		$73.13
This Fund consists of 5 500 Regents University of Maryland		2,500.00
		$2,573.13

DAVID STREET SCHOLARSHIP FUND

1922	
Jan. 1—Balance Cent. Sav. Bank	$50.20
April 1—Interest Cent. Sav. Bank, Oct.-April	.90
Oct. 1—Interest Cent. Sav. Bank, April-Oct.	1.12
1923	
Jan. 1—Interest on all bonds to date	20.06
Jan. 8—Balance Cent. Sav. Bank	$72.28
This Fund consists of:	
3 100 First Liberty Loan, 3½%	300.00
1 100 Second Liberty Loan, 4¼%	100.00
1 50 Fourth Liberty Loan, 4¼%	50.00
	$522.28

DENTAL FUND

1922	
Jan. 10—Balance Cent. Sav. Bank	$25.70
April 1—Interest Cent. Sav. Bank, Oct.April.	.50
Oct. 1—Interest Cent. Sav. Bank, April-Oct.	.50
	$26.70

BURT J. ASPER MEMORIAL FUND

Received from Nathan Winslow, M. D., sixty dollars for the above Fund, the interest from which is to be expended in the purchase of either medical books or journals for the library of the University of Maryland, School of Medicine, inscribed with a suitable book plate, in amounts as follows: Charles R. Law, $5.00; E. E. Nichols, $5.00; Charles A. Waters, $10.00; Vernon L. Oler, $5.00; P. P. McGain, $10.00; Adolph Mulstein, $15.00; Anonymous, $10.00; upon June 28, 1922 .... $60.00

Oct. 5—J. J. Greengrass	15.00
Oct. 11—Arthur M. Shipley	10.00
Oct. 1—Interest Central Savings Bank, October-April	.60
Oct. 23—J. R. Agnew	10.00
Nov. 10—K. B. Jones	5.00
Nov. 10—R. A. Allgood	5.00
Nov. 24—Samuel Moore	5.00
Dec. 14—Randolph Winslow	5.00
Jan. 8, 1923—Balance Central Savings Bank	$115.60

DAUGHTERS OF THE AMERICAN REVOLUTION FUND

Received from Mrs. J. J. Nance check for one thousand dollars, to endow a bed in the Maternity Ward of the University of Maryland Hospital, in the name of the Daughters of the American Revolution:

1922		
Jan. 18		$1,000.00
Jan. 25—1. 1,000 Dutch East Indies 6% bond	$945.00	
Jan. 25—Accrued interest, 23 days..........	3.83	
Jan. 25—Charges Baker, Watts & Co........	.17	
Mar. 10—Exchange 1 1,000 Dutch East Indies 25 years, 6%, 1 1,000 Dutch East 50 years, 6%, interest 1 mo. 5 days		15.03
April 1—Interest Cent. Sav. Bank, Oct.-April		.33
Sept. 21—Interest 6 mos. 1 1,000 Dutch E. Indies, 6%		30.00
Sept. 26—Adjusted interest	.91	
Oct. 1—Interest Cent. Sav. Bank, April-Oct.		1.30
	$949.91	$1,046.66
		949.91
Jan. 8, 1923—Balance Cent. Sav. Bank....		$96.75
This Fund consists of 1 1,000 Dutch East Indies 6%		1,000.00
		$1,096.75

CHARLES FRICK RESEARCH FUND

1922	
Jan. 10—Balance Cent. Sav. Bank..........	$425.73
April 1—Interest Cent. Sav. Bank, Oct.-April.	8.60
Oct. 1—Interest Cent. Sav. Bank, April-Oct.	8.93
1923	
Jan. 8—Interest on all bonds to date........	31.88
Jan. 8—Balance Cent. Sav. Bank..........	$475.14
This Fund consists of 1 500 Fourth Lib. Loan, 4¼%	500.00
	$975.14

JOHN C. HEMMETER AND WIFE FUND

1922	
Jan. 10—Balance Cent. Sav. Bank..........	$388.18
April 1—Interest Cent. Sav. Bank, Oct.-April.	7.47
Oct. 1—Interest Cent. Sav. Bank, April-Oct.	10.50
1923	
Jan. 8—Interest on all bonds to date.......	305.00
Jan. 8—Balance Cent. Sav. Bank..........	711.15
This Fund consists of:	
1 1,000 Chicago City Ry., 5%..............	1,000.00
1 1,000 Chicago Railway's, 5%.............	1,000.00

1	1,000	Minneapolis St. Ry. & St. Paul Ry., 5%	1,000.00
2	1,000	Third Liberty Loan, 4¼%	2,000.00
1	1,000	Grand Trunk of Canada, 7%	1,000.00
			$6,711.15

LAW FUND

1922	
Jan. 10—Balance Cent. Sav. Bank	$172.83
April 1—Interest Cent. Sav. Bank, Oct.-April	3.40
Oct. 1—Interest Cent. Sav. Bank, April-Oct.	3.50
Jan. 8, 1923—Balance Cent. Sav. Bank	$179.73

PHARMACY FUND

1922	
Jan. 10—Balance Cent. Sav. Bank	$47.78
April 1—Interest Cent. Sav. Bank, Oct.-April.	.90
Oct. 1—Interest Cent. Sav. Bank, April-Oct.	.90
Jan. 8, 1923—Balance Cent. Sav. Bank	$49.58

TOTAL PAR VALUE OF ALL FUNDS

Faculty of Physic Fund	$36,512.01
General Endowment Fund	13,286.55
Catherine Gibson Fund	2,310.06
Charles M. Hitchcock Fund	5,222.96
Leo Karlinsky Fund	3,210.70
Leon Frank Fund	2,643.62
Randolph Winslow Fund	2,573.13
David Street Scholarship Fund	522.28
Dental Fund	26.70
Burt J. Asper Fund	115.60
Daughters of the American Revolution Fund	1,096.75
Charles Frick Research Fund	975.14
John C. Hemmeter and Wife Fund	6,711.15
Law Fund	179.73
Pharmacy Fund	49.58
	$75,435.96

January 19, 1923

We have this day examined the cash balances and securities of all the endowment funds of the University of Maryland in the hands of the Secretary-Treasurer, and found them to be correct.

(Signed) J. M. H. ROWLAND.
HORACE M. DAVIS.

EDITORIAL

THE BURT J. ASPER MEMORIAL FUND

Since the last announcement the following contributions have been received:

R. Winslow, class of 1873, Baltimore	$ 5.00
S. W. Moore, D. D. S., Baltimore	5.00
Previously acknowledged	105.00
Total	$115.00

We have been working on this Fund for a year now. So far the response has not been as liberal as had been hoped considering the nature of the memorial. Dr. Burt J. Asper was a member of the class of 1911. When the call came for physicians to serve in the Great War, he did not hesitate but offered his services immediately to the Government. He was granted a commission in the Navy and assigned to the ill-fated Cyclops which with its entire crew mysteriously disappeared. Surely the perpetuation of his memory is a worthy cause. At the same time that you do this, you also supply his successors with an absolute essential in the acquirement of a well-rounded medical education, namely the best literature. In order that the next report be more becoming the object, let us urge you to send in your contribution at once. There is no need to remind you that the principal is held in perpetual trust by the Endowment Committee of the University of Maryland and only the interest therefrom can be appropriated for the purchase of medical journals or text-books.

ALUMNI ACTIVITIES

The Alumni Association will establish headquarters at the Hotel Raleigh during the coming meeting of the Southern Medical Association to be held November 12, 1923. Due notice of the arrangements will be forwarded the alumni at the proper time.

The Annual Meeting of the Alumni Association will be held during Commencement Week. The programme will be made known sufficiently early for those intending to participate to make proper preparations for their attendance. It is sincerely hoped that all those who can, will be present.

DEATHS

Dr. George H. West, Fairmont, N. C., class of 1889 and Jefferson Medical College, class of 1892; at one time lecturer on histology, Jefferson Medical College; formerly connected with the Jefferson, Polyclinic and Presbyterian Hospitals, Philadelphia; for 25 years a practitioner in Philadelphia; died October 30, 1922, aged 60.

Dr. Robert M. Bolenius, Lancaster, Pa., class of 1873; aged 75; died October 13, 1922.

Dr. John Henry McMullan, Edenton, N. C., class of 1876; aged 73; died December 10, 1922, following an appendectomy.

Dr. Irving Smith Coburn, Milton, Vt., B. M. C., class of 1901; state senator; aged 48; died January 20, 1923, from septicemia.

Dr. Wilbur Phelps Morgan, Baltimore, class of 1862; aged 81; died December 20, 1922, from senility.

Dr. Enos Walter Dickson Wright, Langley, S. C., B. M. C., class of 1894; aged 50; died December 4, 1922, from a fractured skull.

Dr. Orion Baum, Vine, Va., P. & S., class of 1885; aged 64; died January 9, 1923.

Dr. Prince Cooper, Van, W. Va., P. & S., class of 1915; aged 36; died December 7, 1922, from meningitis.

Dr. L. Theophilus Hill, Abbeville, S. C., class of 1882; aged 70; died December 26, 1922, from cerebral hemorrhage.

Dr. Thomas J. Talbott, Jr., Baltimore, class of 1895; aged 50; died January 1, 1923, from cerebral hemorrhage.

Dr. John R. Wheless, Spring Hope, N. C., P. & S., class of 1891; aged 54; died December 4, 1922, from cerebral hemorrhage.

Dr. Edward F. Milholland, Baltimore, class of 1858; a prominent practitioner in Baltimore for more than half a century; aged 85; died December 23, 1922, from pneumonia.

Dr. Archibald Cheatham, Durham, N. C., class of 1888; aged 58; died December 10, 1922, from heart disease.

Dr. Columbus Drew, Jacksonville, Fla., Washington University, School of Medicine, class of 1869, Medical Department of University of the City of New York, class of 1879; aged 76; died December 13, 1922.

Dr. Alber J. Remsburg, Warfordsburg, Pa., class of 1874; aged 76; died December 7, 1922, from senility.

Dr. Alexander R. Mitchell, Hereford, Md., class of 1877; aged 67; died December 12, 1922.

Dr. Eugene Justin Butler, Wilkes-barre, Pa., P. & S., class of 1893; aged 61; died November 6, 1922, from cerebral hemorrhage.

Dr. William S. Cline, Woodstock, Va., Washington University, School of Medicine, class of 1867; died November 19, 1922, from a fall.

Dr. Charles T. Horn, Lehighton, Pa., P. & S., class of 1878; aged 74; died November 20, 1922, from paralysis.

Dr. Thomas K. Galloway Baltimore, class of 1876; died December 24, 1922.

Dr. Elias C. Fleming, Hurlock, Md., P. & S., class of 1878; died October 31, 1922, aged 68.

Dr. B. Merrill Hopkinson, Baltimore, class of 1885; a devoted and most valued alumus; prominent for many years in the musical, athletic and professional life of Baltimore; died February 22, 1922, from a complication of diseases, aged 65. His loss is a severe blow to the University of Maryland. For many years he has given his best efforts towards the upbuilding of his Alma Mater. He has been a leading spirit in every one of its foreward movements. To a large part the success of the Centennial Celebration was due to his help and encouragement. For many years he has been treasurer of the Endowment Committee of the University of Maryland. The annual alumni meetings will be the poorer by his absence. An enthusiastic, loyal supporter, a representative of the best type of the old University of Maryland, he stood for the good and the true, we will miss him sorely. God bless you and may your Soul rest in peace.

Dr. John W. Kidd, Burnsville, W. Va.; P. & S., class of 1884; formerly a member of the state legislature; aged 66; died February 2, 1923, from cerebral hemorrhage.

Dr. Joshua Royston Green, Towson, Md., class of 1899; aged 47; died February 22, 1823, from pneumonia.

Dr. Henry Latimer Rudolph, Gainesville, Ga., class of 1902; aged 43; died recently, from pneumonia. Dr. Rudolph was one of the most esteemed members of his class and beloved by all with whom he came in contact. He had attained an enviable reputation as a specialist in pediatrics in his home town.

Dr. Horace Benjamin Coblentz, Washington, D. C., class of 1896; aged 51; died January 24, 1923, from heart disease.

Dr. Christopher C. Webb, Warrensburg, Ill., class of 1881; aged 72; died December 1, 1922, from cerebral hemorrhage.

Dr. John L. Ray, Burnsville, N. C., P. & S., class of 1887; aged 61; died October 27, 1922.

Dr. Albert Leigh Sanders, Baltimore, class of 1905; aged 53; died recently.

Dr. Harry C. Cline, Front Royal, Va., class of 1876; aged 74; died September 29, 1922, from pernicious anemia.

Dr. Frank T. Shaw, Westminster, Md., class of 1864; aged 82, for many years one of the most prominent practitioners of Carroll county; died February 24, 1923, from uremia.

BOOK REVIEWS

Physics and Chemistry for Nurses. By A. R. Bliss, Jr., A. M., Phm. D., M. D., Lecturer on Chemistry and Materia Medica, Grady Hospital Training School for Nurses, Atlanta; Professor of Pharmacology, Emory University, School of Medicine; Formerly Professor of Chemistry and Pharmacology, Graduate School of Medicine, University of Alabama. And A. H. Olive, A. M., Ph. Ch., Phm. D.; Lecturer on Chemistry, Hillman Hospital Training School for Nurses, Birmingham; Associate Roentgenologist, Hillman Hospital; Formerly professor of Physics and Chemistry, Howard College; Associate Professor of Chemistry, Graduate School of Medicine, University of Alabama. 70 Illustrations. Third Edition, Thoroughly Revised and Rewritten and Conforming to the Requirements of the Standard Curriculum of The National League of Nursing Education. 1923. Cloth, $2.50 Net, Philadelphia and London: J. B. Lippincott Company.

Directresses of training schools for nurses will find this book better adapted to the needs of the nurses in training, than ever. Though of necessity the subjects must be discussed in rather a brief manner, still the contents are sufficiently full to meet the needs of the nurse. The style is excellent, the language clear and simple. It is one of the best books of the kind, it has been our good fortune to review. We recommend it with the utmost confidence that the purchaser will be well pleased.

The Successful Physician. By Verlin C. Thomas, M. D., Visiting Physician to Franklin Hospital, San Francisco. Octavo of 303 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, $4.00 net.

The recent graduate when launching into the practice of medicine is suddenly confronted with many problems that were not taught in the curriculum. These must be solved and solved correctly, if his efforts to gain a clientele are to be successful. This book tells how to attract and hold patients; discusses the matter of choice of location; comments upon changing ability into income; considers office equipment and management and deals with such other questions as the doctor and his investments, the physician and the pharmacists, the physician and the special nurse, the physician and the law, ethics, insurance, demeanor in critical cases. All these are live problems; questions of the utmost concern to the medical novitiate that have to be decided and acted on promptly. This side of the practice of medicine has been sadly neglected my medical writers. Any book that will help the doctor over these rough spots, any advice that points out the high-road to the cap-stone that is the ultimate goal of all engaged in medicine, namely, success, is indeed a welcome addition to the medical literature. Thomas has succeeded in an admirable fashion in presenting this phase of medicine to his reader. The advice he gives is sound and practicable. The book is well worth a careful perusal not alone by the recent but also the hardened practitioner.

Generalized Pain. Clinical Symptomatology of Internal Diseases. By Professor Norbert Ortner, M. D., Vienna. Only authorized Translation into the English language of the second German edition. By Francis J. Rebman. With an introduction by Thomas Webster Edgar, M. D., New York. New York: Medical Art Agency.

This book discusses pain in its relationship to internal maladies, abdominal conditions excepted which have been thoroughly analyzed in an independent volume. By this book it is possible for the physician to visualize the pathology causing the pain without the consultation of numerous text-books. The human family will stand almost any discomfort save pain. It is this sympton that brings most people to the doctor, therefore it is of prime necessity that the physician be cognizant of the circumstances giving rise to pain in any particular region. Misinterpretation of the significance of pain often leads to unnecessary, yea, useless operations. It is not an uncommon occurrence of spinal cord irritation from tuberculosis to announce itself by abdominal pain which mimics very closely appendicitis, ovarian inflamatory disease, etc. Many other conditions betray their presence by pain in a remote organ. Therefore pain must be interpreted correctly, if the patient's best interests are to be served. Pain in the heart, in the thorax, in the head, in the extremities, in the bones are a few of the subdivisions of this book. The book is a very valuable contribution to the medical literature and American physicians are indeed fortunate to have at hand in readily accesible form a most excellent translation into English of the German.

Essentials of Surgery. A Text-Book of Surgery. For Student and Graduate Nurses and for those Interested in the Care of the Sick. By Archibald Leete McDonald, M. D., formerly in Charge of the Department of Anatomy, University of North Dakota; Lecturer on Surgery, Nurses Training School, St. Luke's Hospital, Duluth, Minnesota. 49 Illustrations. Second Edition, Revised. Philadelphia and London: J. B. Lippincott Company. 1923. Cloth, $2.50 net.

This book covers in simple language the general principles of surgical diseases and the resulting pathological changes. Under appropriate sections the more important of the surgical lesions involving the special organs are adequately considered. Both the graduate and undergraduate nurse can study the material set forth with benefit to themselves. It is superfluous to remark that the well informed nurse can render more intelligent treatment to the patients under her care. McDonald has succeeded in writing a thoroughly reliable text-book exceptionally well adapted to the needs of those for whom it is especially designed.

How We Resist Disease. By Jean Broadhurst, Ph. D., Assistant Professor of Biology, Teachers College, Columbia University. 138 Illustrations and 4 color plates. Philadelphia and London: J. B. Lippincott Company. 1923. Cloth, $2.50 net.

This book is primarily an introduction to the study of bacteriology and secondarily an outline on immunity. It is sufficiently embracive to give the nurse a clear insight into the infectious diseases, the organisms causing these diseases, natural and artificial antibodies, vaccines, anaphylaxis, etc. It should prove most helpful to nurses desirous of acquiring an intelligent insight into the principles of immunology. It is well illustrated, written in clear and concise language, and sufficiently fulsome for the purposes for which it was conceived. Pupils in nursing will find it a quite satisfactory monograph.

The Biology of Death. By Raymond Pearl (The Johns Hopkins University). Philadelphia and London: J. B. Lippincott Company. 1922. Cloth, $2.50 net.

During recent years much progress has been made by the aid of biology, both general and experimental and statistical and acturial science into the problems underlying the mysteries of natural death. By natural and supernatural means, mankind has endeavored to proto our knowledge of natural death and the causes which determine the span of life. Pearl has collected together the known facts concerning this most vital subject and woven them together into a composite whole in a book of 275 pages. He has brought together many interesting facts dealing with natural death and has covered the subject most thoroughly. Seekers after knowledge upon this most in- long the individual's life. Biological science has contributed much triguing subject will find this book most satisfactory in its enunciation of the problems concerned. It offers to the reader such explanations as have been solved to date, and a working basis for those desirous of penetrating deeper into the processes underlying natural decay.

Nutrition of Mother and Child. By C. Ulysses Moore, M. D., M. Sc. Instructor in Diseases of Children, University of Oregon Medical School; Medical Director of The Cooperative Infant Welfare Society of Oregon; Pediatrist to the Multoomah County Hospital and the Florence Crittenden Home, Portland, Oregon. Including Menus and Recipes. By Myrtle Josephine Ferguson, B. S., Professor of Nutrition, Iowa State College, Ames, Iowa. With 33 Illustrations. Philadelphia and London: J. B. Lippincott Company. 1923. Cloth, $2.00 net.

This book is written in a popular vein which renders it available to the laity as well as to the nurse. It is more of a guide to the proper feeding of the healthy rather than the sickly child and lays especial emphasis upon the proper dietary applicable to the normal rather than the abnormal infant. Breast feeding, vitamins and the mineral content of the diet are particularly stressed. It should prove especially helpful to nurses and social workers when conducting short courses in nutrition for mothers. Any intelligent woman can use it profitably as a guide to the proper feeding of her family.

Ophthalmoscopy, Retinoscopy and Refraction. By W. A. Fisher, M. D., F. A. C. S., Chicago, Ill. Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College; Late Professor of Clinical Ophthalmology, University of Illinois; Late Surgeon, Illinois Charitable Eye and Ear Infirmary. With 248 Illustrations, including 48 colored plates. Chicago: W. A. Fisher, 31 N. State Street. 1922.

In the author's opinion ophthalmoscopy and the fitting of glasses belong to the general practitioner, and acquirement of the necessary practical and theoretical knowledge is easy, interesting and within the reach of all. He has therefore written this book with the intention of teaching medical practitioners and students the practical use of the ophthalmoscope and retinoscope in the detection of diseases of the interior of the eye and for the fitting of glasses when needed. The methods proposed are sensible and practicable, and should help the student materially in acquiring the art of making a complete examination of the eye. He is to be congratulated on emphasizing the importance of every practitioner of medicine making himself competent in examination of the eye-ground, for so many systemic diseases are first mirrored there. It gives us great pleasure in recommending the book to our readers.

I Believe In God And Evolution. By William W. Keen, M. D. Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. Philadelphia and London: J. B. Lippincott Company. Cloth, $1.00.

The main gist of this book is the presentation of scientific data obtained from the operating room and the anatomical laboratory to substantiate the belief of the distinguished author that man and beast are descended from the same remote ancestor. At the same time he asserts that this opinion in no wise intereferes with his belief in the existence of God. In fact he maintains it increases his faith in a supreme deity. Throughout the text he cites many examples of evolution both in plants and animals and calls attention to the similarity of the structural composition of man and animal to support his theory. In other words religion and science are not antagonists but allies, each playing an essential role in rendering life better and happier and at the same time rendering obeisance to the wondrous handiwork of the omnipotent Father.